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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861.

Chicago, Ill., January 2, 1884.

VOLUME XX. No. 1.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year ; Monthly, **$1**.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

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THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

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☞The Mahoning Valley Bee-Keepers' Association, will be held in the Town Hall at Newton Falls, on Thursday, Jan. 24, 1884. As this is the meeting to elect officers, every member and all interested in the production and sale of honey, are requested to be present. E. W. TURNER, *Sec.*

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,..................	$2 00..	
and Cook's Manual, 7th edition (in cloth)	3 25..	2 75
Cook's Manual, (in paper covers)....	3 00..	2 50
Bees and Honey (T.G.Newman) cloth	2 75..	2 50
Bees and Honey (paper covers)......	2 50..	2 25
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	4 00..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping..........	3 50..	3 25
Langstroth's Standard Work.........	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
Alley's Queen Rearing................	3 00..	2 75
Scribner's Lumber and Log Book....	2 35..	2 25
Fisher's Grain Tables.................	2 40..	2 25
Moore's Universal Assistant.........	4 50..	4 25
Honey as Food & Medicine, 100 Copies	6 00..	5 50
Blessed Bees..........................	2 75..	2 60
King's Text Book......................	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper....................	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
New Eng. Apiarian, (W.W.Merrill)..	2 75..	2 50
British Bee Journal....................	3 75..	3 00
The 8 above-named papers.......	9 00..	7 25

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

Look at Your Wrapper-Label.

X SUBSCRIBERS whose papers reach them with this paragraph marked with a *blue* pencil, will please take notice that their *subscriptions will expire at the end of the present month.* Such are marked thus on the label, "Jan. 84." We do not want to lose any of our subscribers, and give this notice so that all may get every number of the BEE JOURNAL without any break, and no papers will be missed. When the money for renewal is received at this office, the date on the label is changed to correspond, and this change is your receipt. If there is any mistake made, notify us at once.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

DADANT'S
HONEY CROP!

Our crop being very large, we offer **THIRTY THOUSAND POUNDS** of extracted Honey

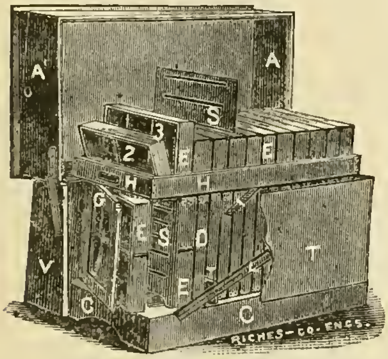
FOR SALE

at REASONABLE PRICES. We have both clover and fall honey. Samples sent on receipt of stamps to pay postage. The honey can be delivered in any shape to suit purchasers.

Send **15c.** for our 24-page Pamphlet on Harvesting, Handling and Marketing extracted honey.

CHAS. DADANT & SON,
5AB1y HAMILTON, Hancock Co., ILL.

1876. CROWN 1882.



The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, **ELVIN ARMSTRONG,**
Prop'r. of the Crown Bee Hive Factory and Apiary,
JERSEYVILLE, ILL.

DADANT'S FOUNDATION

From JAMES HEDDON, July 27th, 1883.—Your Foundation is certainly the nicest and best handled of any I have seen on the market. It is the only foundation true to sample I have ever received.

From JAMES HEDDON, Aug. 10th, 1883.—I will contract for 2,000 pounds of foundation for next season on the terms of your letter.

From A. H. NEWMAN, Aug. 24th, 1883.—Book my order for 5,000 pounds for spring delivery.

From C. F. MUTH, Dec. 12, 1883.—Book my order for 2,000 lbs. of heavy; 1,000 lbs. of thin, and 500 lbs. of extra thin.

Dealers, send in your orders for next spring while wax is cheaper, and save trouble and money.

CHAS. DADANT & SON,
5AB1y Hamilton, Hancock co., Ill.

MANUFACTORY
FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
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Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

Dzierzon's Rational Bee-Keeping.—A Translation of the Masterpiece of that most celebrated German authority, by H. Dieck and S. Stutterd, and edited, with notes, by Charles N. Abbott, *Ex-editor of the "British Bee Journal."* Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon....has probably made greater strides in scientific apiculture than any one man...For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, **$2.**

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years' experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. **Price, $1.00**

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, **$1.25**; paper cover, **$1.**

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.,** postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey; the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **5c.**; per dozen, **50c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price **35 c.** postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. **40** cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, **$2.50.**

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information Price **25c.** for either the English or German editions.

Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.50; for 200 colonies, $2.00.

Deutsche Buecher,
Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern—Schwärmen—Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JANUARY 2, 1884. No. 1.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

The Opening Year—1884.

Twenty-four years ago to-day, our worthy predecessor, Mr. Samuel Wagner, launched the first number of the BEE JOURNAL upon the sea of the journalism of the World. Up to that time, no periodical devoted exclusively to bee-culture had been published in America, and the pursuit was indeed in its infancy. Now, seven Monthlies and one Weekly are being regularly published in the United States, numbering their subscribers in all, from 40 to 50 thousand! Truly this shows *progress* in a quarter of a century! what the next 25 years may reveal in this direction, it is difficult to conjecture.

These facts give a comprehensive view of the mission before us, as well as the exalted possibilities which should inspire us to fresh zeal and grander achievement. Behold, how invention and improvement have followed our pursuit—elevating it, in fact, to the position it now occupies!

Now, in order that we may realize the great possibilities before us, five things are, above all others, essential:

1. We should encourage planting bee-pasturage, that there may be, every season, a crop of honey to gather, in order to make apiculture a certain occupation.
2. Foster district and local societies to afford mutual instruction, and strengthen fraternization.
3. Institute large and attractive honey and apiarian exhibits at all Fairs, to educate the community to the desirableness of a superior product.
4. Cultivate a discriminating domestic market, to encourage superiority and excellence.
5. Sell at all times, and in all places, an honest article under an honest name.

The object of the existence of bee papers is not only to record the news of matters and things transpiring in the apicultural world, but to discuss the newest ideas and inventions as they develop. While giving the strongest arguments, therefore, all should be careful not to use words that may wound the feelings of those whose views may differ with their own. Aye, we should all endeavor to "spread liberally the cement of brotherly-love and affection—that cement which unites us into a society of friends and brothers"—having but one object, and that, the furtherance of the science and art of progressive bee-culture.

We hope our correspondents will endeavor to be guided by the sentiment just expressed, and thus help to bring about a reform in the manner of discussing questions as they develop.

☞By the following notice in the Cedar Rapids, Iowa, *Times*, we learn that Mr. Quinlan, of that enterprising city, is making an aggressive war on adulterated table syrups. He has "hit upon" just the right thing to "*tell*" on the denizens of that "burg." His notice reads thus:

> "Just the thing to eat on your buckwheat cakes—some of Quinlan's extracted honey."

He solicits orders by postal card, and offers to deliver it to any part of the city. That is the way to increase the consumption of pure honey in place of the vile table syrups which entail both disease and death to the users. Honey, that life-preserving and health-giving sweet should take its place on the tables of all, no matter whether rich or poor. It is cheaper, sweeter, and better in every way.

☞The BEE JOURNAL is printed on new type, which makes it very readable, and its mechanical execution is something we feel proud of.

Planning for Next Season's Work.

Brains tell everywhere, but nowhere do they play a more important part than in bee-keeping. It is said that some one asked Opie by what wonderful process be mixed his magnificent colors. He replied, "I mix them with my brains, sir." Every one who would excel in any undertaking must use his brains; and by thought, planning, contriving and inventing, overcome the difficulties that stand in the way, and thus develop the needed improvement.

If "necessity is the mother of invention," we may well claim that a Yankee is its father—for Americans are proverbially inventors. The best labor-saving machinery in the world emanate from the American continent, and it has revolutionized the labor of the civilized world. As examples note the magnificent farm machinery and the mammoth printing presses.

Many complaints were made last season because bee-keepers could not get their supplies when they wanted them. This was the result of not ordering them in time to have them on hand when wanted. No thoughtful bee-keeper should wait until he wants implements or supplies before ordering. Think ahead—plan for the campaign, get what will be needed, and—be happy.

Do not put off necessary work in the apiary, but do it when it should be done—never putting off until to-morrow what should be done to-day. Sufficient for the day is the work thereof.

We might enlarge upon the details, but each can think them out for themselves.

☞ The new Catalogue of D. S. Given & Co., Hoopeston, Ills., is on our desk. It is nicely gotten up, and has quite an array of certificates from those who are using the Given foundation press.

Local Convention Directory.

1884. *Time and place of Meeting.*

Jan. 5.—Marshall Co., at Marshalltown, Iowa.
J. W. Sanders, Sec., Le Grand, Iowa.

Jan. 6.—Nebraska State, at Lincoln, Neb.
M. L. Trester, Sec.

Jan. 8.—De Moines Co., at Middleton, Iowa.

Jan. 8.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.

Jan. 8-10.—Eastern New York, at Albany, N. Y.
S. Vrooman, Pres.

Jan. 9.—Central Illinois, at Bloomington, Ill.
Jas. Poindexter, Sec.

Jan. 10.—Champlain Valley, at Middleburg, Vt.
J. E. Crane, Pres.

Jan. 14, 15, 16.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.

Jan. 15, 16.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec.

Jan. 15, 16.—N. W. Ills., & S. W. Wis., at Freeport.
J. Stewart, Sec., Rock City, Ill.

Jan. 16, 17.—N.E. Ohio, and N.W.Pa., at Jefferson, O.
C. H. Coon, Sec., New Lyme, Ohio.

Jan. 22-24.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.

Jan 23.—S. E. Mich., at Adrian, Mich.
H. C. Markham, Sec.

Jan. 28.—Bee-Keepers' meeting at Monee, Ills.
A. Wicherts, W. Cossens, B. Heyen, Com.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

Wide Frames for Holding Sections.

In *Gleanings* for Dec. 15 we notice the following comments on our article on "Nomenclature of Bee Keeping," published on pages 603 and 604 of the Bee Journal for 1883:

> The A. B. J. for Nov. has an excellent article on calling things by their right names, and gives a list of the terms ordinarily used in bee culture. I would suggest one change, however, and that is, on a frame for holding sections they call it "broad frame" which was the name I originally gave when we first commenced making them; but finding it so often confounded with "brood frame," we changed it to "wide frame," and now invariably say "wide frame" in our price list. You will notice that a single letter would have to be depended on to distinguish between "broad frame" and "brood frame;" and an *a* is so often made like an *o*, there is much danger of confusion. For instance, a customer orders "100 broad frames," and his *a* might be either *a* or *o*. After studying over it, we do the best we can, and send them along; and it soon transpires that he is in a great strait for lack of something that he has not got, and has a lot of frames he did not want. Now, you see if we name them "brood frames" and "wide frames," both short names, too, there is not much danger of confusion.

We are glad at all times with criticisms in a friendly way, and will here publicly thank Mr. Root for his remarks. But had he read a little farther on in the same page, he would have seen that we gave the preference to wide frames in the following language:

> "Wide Frames.—Frames two-inches wide to hold sections at the side of the brood-chamber, or in the second story."

We are well aware that the glossary there given is neither complete nor perfect, and hence we are glad to have criticisms. One correspondent says in a private letter: "I would like to criticise your glossary, but as I am not well-acquainted with you, will forbear." That is where he errs. We think that our friends will give us credit for good-nature, and we quite enjoy criticisms, if they are made in a friendly way. Our article was only intended to introduce the subject, and we hope all will be free to suggest amendments, and thereby settle upon correct phrases for our pursuit. One sentence in Mr. Root's criticism is consoling. It is this: "We now invariably say Wide Frames in our price lists." That is right, and we hope that all who will soon be publishing price lists for 1884 will make a thorough revision and "call things by their right names." That will be a good step in the *right* direction; for in the price lists of last year there were much confounding of terms. Will they please take the hint, and compare their "copy" before giving it to the printer with our article on pages 603 and 604 of the Weekly, or page 356 to 358 of the Monthly Bee Journal for last year.

Some further criticisms will be found in this and succeeding issues of the Bee Journal, as fast as we can find room for them.

◆

☞ The *American Agriculturist* is one of our most valued exchanges. It has just entered upon the 43d year of its existence, with varied improvements, and more reading matter and engravings. It is invaluable to those engaged in farming pursuits. We will send the *American Agriculturist* and the Bee Journal for one year to any address, on receipt of Three Dollars.

◆

The Surgeon's Daughter.—T. B. Peterson & Brothers, Philadelphia, publish this day, "The Surgeon's Daughter," being the *Sixth Volume* of their new and cheap edition of "The Waverly Novels," by Sir Walter Scott, which will be completed in Twenty-six Weekly Volumes, each volume being a novel complete in itself, and one volume will be issued every Saturday until the whole are published.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Dec. 30, 1883.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no excitement in the honey market. The demand for extracted honey is improving, but supplies being large, prices keep down. It brings 7@10c. on arrival. Arrivals of comb honey and demand for it, are in fair proportion. A choice article in ½ lb. sections brings 20c. per lb. from store, and 16@18c. on arrival.

BEESWAX—Scarce; brings 28@32c. on arrival.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@22c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@½10c.; dark, 8@9c.

BEESWAX—Prime yellow, 27@29 c.

H.K. & F.B Thurber & Co,

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. Burnett, 161 South Water St.

KANSAS CITY, MO.

HONEY—No change to note since last report Prices and demand well sustained, and receipts about equal to shipments. White comb, 1 and 2 lb. sections, 17@18c. Extracted, 8@10c.

Jerome Twichell, 514 Walnut Street.

SAN FRANCISCO.

HONEY—There is a limited demand for comb of superior quality, but all other descriptions are slow of sale, and the market for the same, weak. Sales of candied at 5½c., and very good quality, uncandied, at 6c. White to extra white comb, 15@20c.; dark to good, 9@11c.; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Comb 13@18c. per lb. Strained and extracted 7@8c.; choice in cans more.

BEESWAX—Firmer, at 30@31c.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.

BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY—Our market is very quiet on honey. We quote 16@18c. for best 2 lb. sections—18@20c. for best white 1 lb., and 10c. for extracted.

BEESWAX—We have none to quote.

Blake & Ripley, 57 Chatham Street.

◆

Vick's Floral Guide.—Here it is again, brighter and better than ever; the cover alone, with its delicate tinted background and its dish of gracefully arranged flowers, would entitle it to a permanent place in every home. The book contains three beautiful colored plates, is full of illustrations, printed on the best of paper, and is filled with just such information as is required by the gardner, the farmer, those growing plants, and every one needing seeds or plants. The price, only ten cents, can be deducted from the first order sent for goods. All parties any way interested in this subject, should send at once to James Vick, Rochester, N. Y., for the Floral Guide.

CORRESPONDENCE.

For the American Bee Journal.

Bee - Idyl.

MEDORA CLARK.

He lies in his hammock under the trees,
In the bush of summer hours.
And he hears the voice of plundering bees,
Down there on the bed of flowers.

The restful, mumuring music of bees
In their buzzing, monotonous note,
On memory's board of ivory keys,
Has 'wakened a muffled note.

And he tries to drown, in an idle dream,
To-day with its living prose,
And glide to that past, which will always seem
A poem of gild and rose.

Though hours be as sweet as an angel's thought,
And skies wear a tender hue—
We yet dream of days whose heavens were wrought
From a turquoise of finer blue.

An hour flies by, on the pinions of time—
He's resting, "Ah, bless those bees!"
He rests and dreams to their rythm and rhyme,
And the stir of the summer breeze.

Now his slippered feet on the turf are flung;
He yawns and essays to rise.
A smothered oath—a crushed white flower—"I'm stung!
Confound those bees!" he cries.

Madison, Wis.

For the American Bee Journal.

Bee-Keeping in France.

ARTHUR TODD.

Some years ago, I made the acquaintance of Monsieur Georges De Layens, of Paris, who then was earnestly advocating the merits of the movable comb hive, and had put before the French bee keepers a book replete with scientific, practical knowledge. Many pleasant and profitable hours have I spent in his company, and worked in his apiary, which is some 40 miles from Paris. My coming to this country; for some time put an end to the discussion of our favorite topic, but, appreciating his love of knowing all going on in bee culture of a progressive nature, I sent him at various times, journals, catalogues, etc., which contained illustrations of bee appliances of a novel character.

Finding my location, he has lately sent me a copy of his new book on bee keeping entitled "Letters to a Friend" and a photograph of his apiary. Thinking it may interest some to see it, I send it to the BEE JOURNAL as the surest means for one and all to have a peep. On the occasion of my first visit to this apiary, Mr. Layens was not able to accompany me. Armed with his introduction, I started at 5 a. m. on a Sunday morning from Paris, visiting the historic town of Dreux on my way. Arriving at the station, I found I had a country walk of some 2 miles before me, but this I soon covered, and presented myself tired, and weary at the hour of high 12 at the door of Monsieur le Cure—who was temporarily caring for Mr. Layens' bees.

My mission explained, the good Cure welcomed me in the most hospitable manner; the best in his house was set before me, and bee talk ran riot. Great was the surprise to see me come armed with a smoker, bee veil, thermometer, etc., and each article was carefully examined by the visitors, for one by one the whole village seemed to learn that an English bee keeper had arrived, and (accidentally of course) they called in to see the Cure, and found me and my interesting exhibit. At 2 p. m. the good Cure, myself, and a few others went to the apiary. It was then as now seen in the illustration.

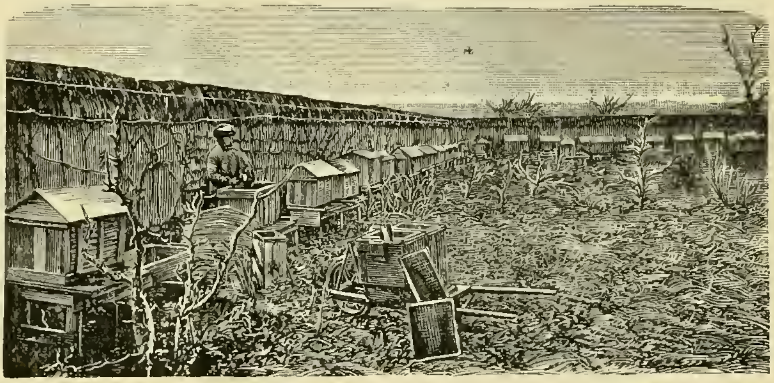
We opened hive after hive, taking out frames (large and deep) loaded with honey. There, just behind that hive where stands Monsieur de Layens did the dear good Cure, exhausted by excitement and physical weakness sink prone on the grass. We revived him, and when rested we returned to the village. Those among us who were of the old-school, having completely changed their minds, after the ocular demonstration afforded them of the facility with which the honey might be taken, and no bee lose its life.

The Cure sung vespers while I rested myself, and then the old horse and chariot was brought out. Seated in it, I found the Cure wished to speed me on my return journey all he could, and at the same time show me a sight never to be forgotten. He drove me through a forest where the heather was in full bloom, and, in a secluded hidden spot, he showed me some half dozen large straw hives (certainly the largest I have ever seen.) They were crammed full of bees and honey. Thousands of bees, idle for want of room, and around me such a mass of floral wealth as I think I have never seen equalled. Those only who have seen the heather in full bloom, in all its glory, can appreciate the reasons for the annual migrations of bees and hives that take place in France and Germany.

There, seated on a rock, the Cure told how he had helped like a true man, to do his duty to his country, by following the French army in that dire Franco-German war, and affording all the material aid he could, to the wounded and the last sad offices of religion to the dying. Alas! this noble man, whom to know was but to love and honor, had lost his health and strength in trying to serve his brethren. This noble brother bee keeper had in him that day, the consuming fire of "consumption." As he told me of his weakness I thought of the packet of quinine in my pocket, and begging him to use it, and cure himself. I parted from one of nature's noble men. He died in the arms of my friend Mr. Layens, and dying his thoughts went back to the Sunday in the apiary, the quinine, etc., and he charged Mr. Layens to present me with his love, and good wishes. Good and true men are few, but in the ranks of bee culture they *are* to be found.

Mr. Layens being of independent means has been able to give his scientific researches full scope, without being hampered by any thoughts of the having to make his apiary pay a profit on the capital invested. He has taken up at times certain special points in apiculture, and at great personal cost and labor, set himself the task of unfolding its hidden mysteries. On one occasion he established apiaries at certain points on one of the Swiss Alps. Each apiary being at a higher level than the one immediately beneath it. The deviation of honey yield in each zone was carefully noted, and by chemical analysis the constituents of the honey from each zone were looked into. The moment of the departure of the first bee at the beginning of each day's toil at each successive altitude was taken, and an inspection of the note book recording the results of these "before breakfast studies" showed me the intense love of the science of bee keeping that animates Mr. Layens.

The relation between the number of bees fanning at the door and the necessity for a greater or less evaporation of moisture was another of his studies. Foul brood has per force been of late one of his studies, and I propose to translate, and in a later number of the BEE JOURNAL give in his own words his own method of treating this dreadful disease.



In a recent letter he says: "My apiary has given me much work for the last two years, although I have but few colonies, the terrible disease of foul brood reigning all over the country—each spring, for two years past, my apiary has been attacked. This spring I only had 18 colonies, but of these 7 were attacked. I am now up again to 28 colonies; apparently the disease is cured. I believe I have solved the question of curing foul brood, *but* the great difficulty consists in preserving the apiary in the future where one finds himself in the midst of an infected region."

Mr. Layens is deeply interested in the botanical questions affecting bee keeping, and asks me for the names of the plants, and the date of flowering, that yield the greatest amount of honey in the various sections of this vast republic. Any brother bee keeper that can favor me with such a list especially noting the botanical features of his locality, will have my best thanks, and be carefully mailed to Mr. Layens.

Some of his botanical remarks in recent letters to me may be interesting and I will quote: "I see by your letter to the *Bulletin de la Somme* that the Americans gather prodigious quantities of honey, and that these large yields are due to the united influence of climate, flora, and soil, (still new) of the United States, and that it would be impossible to us here in France to obtain such splendid results. In America much is written about the linden or basswood tree as being very mellifluous. Alas! close to my apiary are 500 linden trees, and never once in 7 years have my colonies increased in weight at the time of their flowering. Again, there are certain plants that yield honey well in certain kinds of ground, and none at all in others. I had some 19 acres planted with buckwheat all around me, and the bees hardly touched a plant—yet in Brittany it is accounted a good honey plant. One of my relatives, a first rate botanist, having observed in Norway some plants accounted very mellifluous, brought some seeds to our domain, and planted them. Not one of my bees gets honey therefrom. If I only had lists of the honey-bearing plants in the various sections of the country I could very quickly make a comparison with the honey-bearing plants I know. It would be very interesting to see what are the plants giving so much honey in your country, and to compare the honey-bearing power of certain of those plants which doubtless are found here in France."

Thanks to the unselfish exertions of such men as these I speak of. The bar frame hive is making headway in France, and now comb foundation is purchased, not as it was from me 5 years ago as a curiosity, but as a necessary adjunct to modern bee keeping.

Well do I remember filling orders for foundation by the *half pound* per mail, and the amazement of myself and family to get an order from a very venturesome Frenchman for 30 lbs. I never saw that man, but in long letters I minutely taught him how to fix foundation in his frames, and how to use it successfully. To-day he has a Root 12-inch machine, and is doing the largest trade in the article. There is one other machine in France, a Dunham, I think, but I have no particulars of sales.

If time permits, I will offer some further remarks on bee keeping in France in a future number of the BEE JOURNAL.

Philadelphia, Pa.

For the American Bee Journal.

Winter Repository For Bees.

A. C. BALCH.

If I could choose my place, I should choose one where a natural spring of water flowed from the ground, from a side hill, and then dig into the hill and make the cellar over it, allowing it to run out of the cellar constantly, all open in the cellar.

The next best place would be, a cellar large enough to have a good cistern of water in it. Both tending to keep the air moist. I have every reason to believe that there are more bees killed by having them kept too dry than of having them too damp.

For facts. I, one fall, built a bee house with a cellar under it, in which to keep my bees through the winter. I got it completed in November, and put 60 or 70 colonies in it in less than 10 days from the time the house was built. The cellar was made of stone below the ground, and brick above, laid in lime mortar, so damp that I was afraid I should lose them all. I gave them no ventilation outside, but a small wooden one up through the floor to the room above, through that into a space under the roof, and then stopped. After a few days I looked in; the cellar was about 10 by 16 ft. inside, and the hives were put in on two sides and back end; three hives high.

Now for the condition. The cellar walls, the joists and floor over head all hung with water in drops; in fact some of it had dropped off on to the hives and ground. I closed the doors, one opening outside and one inside, lit a lamp and examined them. They were so quiet that at first I thought they were all dead, but the cold air let in by opening the doors, and the light, soon animated them and they began to show themselves at the entrance as lively as I could wish. I was satisfied that they were all right, put out the light, closed them up, and left them until the next April, when I took them out on a good, sunshiny day, in the presence of Mr. Heddon, and to his great surprise all were right and strong, as he had lost all of his that winter.

My hives had no ventilation, except the entrance contacted to ⅜ of one inch by 4 inches; top closed tight, and sealed by the bees as tight as wood and propolis could make it.

Some of the outside combs were moldy and moist; all of the combs were more or less moldy at the bottoms; but there were very few dead bees; the live ones were bright and lively, not a queen missing and the air was soon full of bees, but diarrhœa and brood were both lacking.

Mr. Cornell thinks they would have died if left any longer. Perhaps they would, but they had been in from November to April and showed no signs of disease, and could he have seen them fly that day he would not have called them very sick.

The 150 I lost since, I left out doors without any protection.

I well remember the conversation Mr. Heddon and I had that day. He took out the frames of the first hive I took out, while I was getting the second; he held up a frame and said: "Mr. Balch your comb is all moldy. I looked at it and said that it did not matter, as the bees would clean them all up in short order; but, he said, they are all damp and moldy. Well, I said, yours are all dry and the bees dead. He has acknowledged since in one of our conventions that I had the best of that argument. The first and only time I have ever heard him do so, to myself or any other person. How is that Mr. H.? Is it true?

Kalamazoo, Mich., Dec. 17, 1883.

For the American Bee Journal.

Italian and German Bees.

W. Z. HUTCHINSON.

On page 655 of the JOURNAL for 1883 Mr. Demaree gives 13 points in favor of the Italians, and 4 in favor of the Germans, and then attempts to explain away the good points of the German, but neglects to do as much for the Italians. The most of the points given by him in favor of the Italians he would probably have found as difficult to explain away as he did those in favor of the Germans; while, with a few of them, he *might* have succeeded even better.

He says: "The Italians adhere with more tenacity to, and spread more evenly over the combs when manipulating them."

This spreading evenly over the combs, and remaining quiet while being handled, *is* an advantage, but the tenacity with which they cling to the combs is a *dis*advantage.

"The Italians build their combs more compact and squarely in the brood nest." If true, this would be no advantage in these days of comb foundation.

"Italians adhere better to location when moved a short distance." If true, this might be an advantage to the queen breeder, but to the practical honey produces is scarcely worth counting.

"The Italians are constitutionally a stronger race." Important if true.

Mr. Demaree admits that "the peddling little black imps 'pile on' an excess of wax in the process of capping, and thereby impart to their combs a dead, chalky appearance decidedly inferior, in his judgment, to the delicate cream-tinted combs so deftly finished by the Italians." Whether the "dead chalky whiteness," as Mr. Demaree is pleased to call it, is caused by the "peddling little imps" "piling on more wax" or by a space left unfilled with honey just beneath the capping, we will not here discuss, but we would remark that it may be well enough for Mr. Demaree to talk about "the peddling little black imps," and the "dead chalky appearance," and the "delicate cream-tinted comb so deftly filled by the Italians," but all this rubbish is swept away when the "dead chalk" comes into competition with the "cream-tinted." It might be mentioned that the truest, whitest combs always carry off the prizes at the fairs, but this is not so important as the difference in price when the honey is marketed. Just turn to some of the market reports, and such expressions as these will be found: "New crop, prime one pound sections (pure white) have sold for 20 cts., when in fancy cases." "1 ℔ sections, well filled, 18 cts. None but white being taken." When in Chicago last October, I visited the commission merchants who handled honey, and was shown honey of different grades. The very whitest, "dead chalky," honey was selling for 20 cts.; honey just as good, but having the "cream-tint," brought only 18 cts. Now why try to "slide" over this point by using such expressions as: "Peddling little black imps," "dead chalky appearance" and "delicate cream-tinted combs so deftly finished"? Why not come out, like a man, and say: "Yes, it is true that the German bees furnish the whitest combs, and though *my* taste is in favor of the 'cream colored,' yet the public is in favor of the "dead chalky" at the rate of 2 cents a pound."? I believe that no one has asserted that the superior whiteness of the combs adds to the good qualities of the honey *itself*, but appearance always has had, and always *will* have, a market value; why ignore it?

That the Germans are *not* better comb builders than the Italians, Mr. Demaree brings forward no proof except his own experience; but, although, he does not forget to inform us that that experience has been drawn out to a great length,—nearly 40 years—yet he forgets entirely to mention its *breadth*. A man may be doctor, editor, lawyer, clergyman, professor, or merchant for 40 long years, and all this time may be "dabbling" with a few colonies of bees; another man drops everything for bee-keeping, devotes his whole time, talent and energies to the business, thinks of little else during his waking hours, and even dreams of bees. He reads almost everything written upon the subject, visits bee-keepers and attends conventions, and conducts experiments upon such a comprehensive scale as to give weight to the conclusions drawn therefrom. He continues this course for 8 or 10 years, and becomes, every inch, a thorough going, well-informed, first-class bee-keeper; but let him attempt to express his views, and ten to one if some "professional dabbler does not exclaim: "Oh you have had no experience young man, while *I* have been in the business 40 years." Now, which one knows the most of what he is talking about? I do not wish Mr. Demaree to think that in writing thus I intend to be personal, nothing of the kind. I merely wish to show that, to have value, experience must have breadth and quality as well as length.

Mr. Demaree has seen it mentioned in print, that "the Germans are better comb builders"; he has seen it so often that he does not know how many times he *has* seen it, yet it counts for nothing against *his* "long" experience.

That "the Germans build less, or more, drone comb" is immaterial now that we have comb foundation.

That the German bees do *not* enter the surplus receptacles more readily, Mr. Demaree attempts to prove by again putting his "long" experience "against the world." Oh yes, and he also mentions that there has always been complaints because they did not enter the boxes. Of course there has always been such complaints, and there always will be, because many bee-keepers do not understand the principles of comb-honey production, but among well-informed, experienced, comb-honey producers, these complaints have been neither long nor loud.

That German bees produce whiter combs, are better comb builders, enter the surplus boxes more readily, are less liable to upset the aparist's plans by their swarming propensities, than the Italians, has been so generally admitted, that, to me, it seems like a waste of time to attempt to prove the contrary.

I believe that we "hybrid" bee-keepers admit, (I know that I do) that, upon actual count, there are more points in favor of the Italians than there are in favor of any other pure variety, and that for the production of extracted honey they are unexcelled; and, of course, the "pure Italian" bee-keepers find no fault with this admission, but the moment that we reach out for the good qualities of the German race, and say that, in the production of comb honey, we cannot afford to ignore the few good qualities that they possess; when we try, by crossing the two varieties, to obtain a strain of bees possessing the good qualities of *both* varieties; then, as the "old school" physicians condemn the Eclectics because they are progressive enough to use remedies that they find good, even if not mentioned in the books, so would *some* of the old school bee-keepers condemn us.

I have no desire to build up nor to pull down the reputation of any variety or strain of bees, my only desire is to arrive at the truth; and, if there is a better bee for the production of comb honey than a cross between the dark leather-colored Italian and the large brown German—not the "little fidgety black imps"—no one would be more pleased to know it than myself.

Rogersville, Mich., Dec. 20, 1883.

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☞ Letters for publication must be written on a separate piece of paper from items of business.

For the American Bee Journal.

Section Rack Comment.

T. E. TURNER.

The comment of Mr. Hedden, on page 558, of the BEE JOURNAL for 1883, on my article on Section Racks, deserves a little notice, "ere some of the less experienced be led, what seems to me, astray;" and what I have to say may serve, in part, as an answer to J. C. Thom, on page 548.

I do not claim to have tried as many devices for holding sections on the top and sides of hives, as Mr. Hedden, but I claim to have thoroughly tested the rack he uses, except the ⅜ inch space between tiers, and I find it much more impracticable than the portable-sided rack, in all the respects indicated in my former article. I fail to see wherein the movable-sided rack is "weak and incapable of enduring some of the most important manipulations," from anything that has been said against it by Mr. H., and I think I have handled quite a few bees.

With respect to the variations in the shrinking and swelling of wood in sections, in the use of the movable-sided rack, I have not experienced the slightest inconvenience, from their use for 4 years, and, perhaps, that is a little longer experience than he has had with them.

It may be that glass is objectionable to bees, but with all my observations, I do say that bees do not "sorely neglect those combs that are next to them." Bees do not always work as quickly on the outside sections as they do the centre ones, in any kind of a rack, but that those without glass, are perceptibly more acceptable to the bees than those with them, may be considered an open question. The glass admits of the same examination between the ranges of combs that others do, and then one can see with them, with sufficient accuracy for practical purposes, when the sections are full, without disturbing the bees by taking off the honey-board, for generally bees commence work in the centre, and when the outside combs are capped, all are ready to remove.

If glass is so objectionable to bees, those who think so can have racks without it, for, like separators, they are no part of a movable-sided rack. I have never tried separators on one side of sections and glass on the other, but from my use of separators, I would lay the blame on them, rather than the glass. Though I regard glass as a very convenient arrangement, yet the views and taste of the individual must regulate that matter. The expense of movable-sided racks is but a trifle more than those with stationery sides, especially if the views are left off.

I did speak of the risk of breaking the cappings in shoving one section past another, for that is the danger with his rack in removing single sections. Full sets, or even rows, cannot always be removed, for the bees will not always fill a set full, and it may be desirable to leave those partially full on the hive, and take full ones off, putting new ones in their place. If one or two sections alone are to be removed, and empty ones put in their place, the movable-side need not be taken out, but only the keys loosened, and there is then no re-adjusting except tightening the keys by pushing them down with the hand; and only when a full set are to be removed, are the sides taken off.

Nothing was said about the speed of taking out one section at a time, but the safety of the comb in the movable-sided rack is the point of preference, but the speed, as well as the safety, I think, would be in favor of the movable-sided rack.

I make no pretentions to being a large honey-producer, but on looking over the report of the Northwestern Convention, I find I am more than an average in the amount of surplus honey and the number of colonies, and could report more than Mr. Heddon of an average per colony of surplus honey and increase, and I claim the right to think that the time I gave to my bees had to be used as actively as his.

Some who reported at that convention are far ahead of him in the average per colony, and have a goodly number of colonies too, that are using the movable-sided racks, and would have nothing else now, having thoroughly tested the stationery sided racks, and discarded them.

If one finds a few bees in the way, let him put the edge of the rack on the back edge of the one already on, and shove it gently from him until it is in place on the other, without hurting any bees. A ⅜ inch space between the honey-board and sections allows the bees to gum the sections on the bottom and top too, in tiering up, and this they invariably do, more or less, for experience has proved it.

I tried 10 racks in 1882 without any honey-board, and with a ⅜ inch space over the brood-combs under the sections, and the sections in these racks were so gummed up that they had to be cleaned off before they were fit to case, while those on a honey-board were clean. My experience with them was such that I decided never to use any more racks without honey-boards with slats on which to rest the sections, to keep the bees from spoiling them with wax.

The assertion that bees "will squirt in between sections set on top of each other more glue than they will put on those with ⅜ inch space from any other surface," needs some proof when the experience of many is the opposite. True, they would do that if much space was left, but with the sections we use, and such as are properly made, there is very little if any space between the bottom and top of sections tiered up. With regard to the spaces interfering with the work in the surplus receptacles, I refer Mr. Heddon and others to my former article on that point, which, seems to me, remains unanswered. I, too, "am willing to leave the matter to the coming practice of honey producers," and willing or unwilling, there is where it must be left.

Sussex, Wis., Nov. 17, 1883.

For the American Bee Journal.

Cause of Moisture in Hives.

S. CORNEIL.

Although in Mr. Heddon's article, page 590 of the BEE JOURNAL for 1883, there are points on which much might be said in reply, it is perhaps better not to have too much of one subject, so I shall not at present say a word more about pollen, humidity or dysentery. But another question is raised on which we differ, and as it relates to a matter which has come under the notice of most bee-keepers, I feel reluctant to let it go by default, without submitting it for their decision. I shall give Mr. Heddon's statement of the case in his own words. The italics are mine.

On page 269 of the BEE JOURNAL for 1881, he says: "In nearly every repository, or out-of-doors, *as soon as a colony is dead, dampness accumulates in the hive, an effect*, not a cause *of the death of the bees*."

On page 392 of the BEE JOURNAL for 1882, he says: "I have found that *the honey soon gets thin after the warmth of living bees is exchanged for the damp carcasses of dead ones*."

In his late article, page 590 of the BEE JOURNAL for 1883, he says: "In regard to the excessive dampness found in colonies having died of dysentery, it will be found upon close examination, together with more extended observation, that *the wet moldy condition is the effect of the death*, and not the cause.

That is, the water which we find condensed on the sealed honey and on the inside of the walls of the hive, and sometimes running out of the flyhole, comes from dead bees.

On the contrary, I hold that this water is produced by living bees, and that when they die, its production ceases, and I think it is not difficult to understand how it is that a colony whose numbers are daily decreasing, should, in their efforts to make up for the loss of heat by the reduction of their numbers, consume more fuel, thus producing an increased quantity of vapor which, if it be produced faster than it escapes from the hive, soon accumulates, and is condensed, causing the appearance of matters as we often find them after the bees have died.

In support of the opinion that the inside of the hive is often dripping with moisture while the bees are still alive, I do not see how I can do better than to give the observations of Mr. Heddon as stated by himself.

On page 392 of the BEE JOURNAL for 1882, he says: "I saw Mr. Balch's bees come from a close unventilated room, *dripping with water and combs all moldy*, in excellent condition. I have seen the same on other occasions."

And on page 464 of the current volume, we find him saying: "I am somewhat at a loss to know why he (Dr. Tinker) so carelessly passed by the fact, that so many instances are recorded, where bees came out of special repositories *perfectly drenched with dampness*, and *the combs covered with blue mold*, but with the bees perfectly healthy."

I ask those who have had experience to decide whether the moisture found when we came to examine colonies which have died, emenated from the bees while alive, or from "the damp carcasses of dead ones."

Lindsay, Ont., Dec. 11, 1883.

For the American Bee Journal.

Will all Pure Honey Granulate?

J. W. MARGRAVE.

In Mr. Dadant's book on "Extracted Honey," etc., he takes the position that pure honey will *always* granulate in his latitude, and, of course, the converse of this, *i. e.*, that honey that does not granulate in cold weather is impure, not ripened, or else adulterated. The Toronto Convention came very near taking the same ground.

I have great respect for Mr. Dadant, as also for the Toronto Convention, and do not doubt the ability or candor of either, yet I cannot indorse the position. I have handled honey in a limited way for the past 10 years, and have not had a single pound of candied honey of my own, nor have I seen a specimen of it in this country since I have been here—some 20 years. I do not know why it is; neither do I know why honey does, or does not granulate, and I do not want to be placed under the ban of suspicion, either.

I as cordially despise the adulteration of honey by glucose, or anything else, as any one, and I have been in full sympathy with all that I have seen written against the adulteration of all foods. I think the man who is guilty of doing so for gain, is guilty of a heinous crime, and should suffer the full penalty of a stringent law; but, as my honey thus far stubbornly refuses to granulate, I must demur to being classed with adulterators.

It may be said that my "honey is not well ripened." Well, I think that honey that weighs 12 lbs. to the gallon, is not very unripe; as I understand it, honey that is not ripe is in danger of souring; my honey is so thick that in cold weather I can hold 2 or 3 lbs. on a common case knife. It is so thick that it will not run out of a 2 inch molasses gate in cold weather. Our honey resources are almost identically the same as those Mr. Dadant mentions; heartsease largely predominating.

Please do not put me on the list of adulterators, nor call my honey glucose; I cannot stand that.

Hiawatha, Kans., Dec. 17, 1883.

[The rule is that pure honey will granulate in cool weather, but there are exceptions; and Mr. Margrave's is one case of exception, evidently.—ED.]

☞ The annual meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 8, 1884.

M. C. BEAN, *Sec.*

For the American Bee Journal.

Essentials of the Coming Steam-Engine.

WM. MUTH-RASMUSSEN.

I have felt a lively interest in the improvement of steam-engines ever since I have handled them, which I begun about 20 years ago. There are many natural laws, that have an important bearing on steam-engine construction, but inventors are apt to give undue prominence to one or more points, which are made much of, to the neglect of others which are, perhaps, of equal or even greater importance. Nearly all who have written on "the coming engine," "a standard engine," etc., seem to take it for granted that some one of the engines or boilers now in common use should be adopted as such. I think that advanced engineers in the latter part of the 19th century should do better than that; and look for an engine constructed on a new and scientific plan, and a new system of manipulation and management, that by its adaptation to the natural properties of steam and the requirements of engineers, shall commend itself to enlightened minds, and not need the formal endorsement of conventions and societies. Those who do not appreciate applied science will, of course, be free to use steam on Watt's, Corliss, or any other plan they may choose. Of the improvements of the past, sliding valves must be retained, but of an entirely different construction from those now in common use; and should be *fixed*, and reversible as well as movable. Steam-power has become a staple necessity, and its production must be provided for.

Self-oilers are so convenient and popular, that the best possible system of using them should be adopted; and be of a sufficient number of different sizes to meet the requirements of all—for home use and market—which should be of such proportionate dimensions as to be usable on the same engine without change or alteration of engines.

The exhaust-steam is too valuable to be neglected, and intermixed with cold water, to be re-injected into the boiler, is too useful to be rejected until something better is provided.

Cushions or packing of wool, hair, wood or other non-conductors of heat, or confined air, may be used to economize fuel in cold seasons and climates, and occupy space on top and on all sides of the boiler, frequently used for surplus storage of dust and all kinds of trash, except when the inspector comes round, or gained by reducing the pressure of steam to correspond to the diminished amount of work to be done at certain times of the year.

I will here summarize some of the essential points as follows: It must be perfectly adapted to either high or low pressure, at all seasons and in all climates. To secure this the boiler must be deep and capable of any required amount of contraction or expansion, on all sides alike, by making it of India-rubber or some similar material. It must supply abundant room for surplus-steam as closely as possible to the cylinder, with free continuous passages. It must be equally adapted to a vertical or horizontal position, using either position as may be required, without change or alteration of parts. It must be easy to manipulate for all purposes, with the least possible danger of hurting the engineer or making him mad. It must be of simple construction, rejecting all unnecessary parts and complications, such as throttle-valve, piston-rod, cross-head, governor, crank, balance-wheel, etc. There are several minor points that I will not stop to enumerate, but all are in harmony with the above.

I am looking for the "coming steam engine," and shall continue to do so until it appears. To show that looking with me is not idle watching and waiting to see what others are doing, I may be allowed to state that I have at several times devised, constructed and tested steam-engines that embodied my best ideas at the time, and now have engines in use, that seeem to be right in the plan, and only require to be perfected in details, so that any blind, deaf and dumb idiot can run a steam-engine the first time he lays his hand on it.

By comparing the above with the article "Essentials of the Coming Hive," on page 575 of the BEE JOURNAL, it will be seen that the writer and I agree perfectly in the desired requirements of our "coming hobby horses."

Independence, Cal., Nov. 22, 1883.

* * *

For the American Bee Journal.

Correct Use of Apicultural Terms.

WM. F. CLARKE.

It was a good beginning in a needed line of improvement that was made by the editorial of BEE JOURNAL, No. 48, entitled "Call Things by Their Right Names." Critics and reformers, however, become shining marks, and are very apt to have the proverb "Physician heal thyself" shot at them. The editor of the BEE JOURNAL is one of the most genial of mortals, always bubbling over with good-nature, so I am certain he will take no offence at the tables being turned upon himself a little—which is the object of the present article.

The vocabulary or encyclopædia of bee-keeping words and phrases, is for the most part excellent, but is, I think blemished by a few inaccuracies, which it will be well to correct in a future edition. For I do not doubt that this beginning will some day grow to a size and importance that will justify its publication in the form of a pamphlet or hand-book. Let every bee-keeper think the matter over, and should any addition or correction suggest itself, it will be well to "make a note on't," and forward it to the JOURNAL. Thus, in time, we may hope to have a complete and correct nomenclature of bee-keeping.

I subjoin a few criticisms which have occurred to my mind in conning over the article now under notice.

"Apiarist.—An expert bee-keeper." Is not "expert" redundant and incorrect? Would not "A bee-keeper" be an all-sufficient definition or synonym for "apiarist?" If apiarist means "an expert bee-keeper," then it will be hardly modest for any one but such as Langstroth, Jones, Heddon, Doolittle, Root, Dadant, etc., to say "I am an apiarist." May not an apiarist be either inexpert or expert? I will say here that I like bee-keeper, better than apiarist, though the latter term sometimes comes handy to avoid repetition. Of two words meaning the same, commend me to the simpler one.

"Apiary.—A place where bees are kept." Now is that so? Is not an apiary the whole establishment, bees, hives, extractor, smoker, veil, etc. "Place" is rather the spot or locality where all this is gathered. It may be a lawn, grove, building or as with Bro. Muth, the roof of a store. But I think apiary is, strictly speaking, the entire institution over which the "apiarist" presides.

"Bee Moth.—A miller which preys upon the combs." I am not enough of an entomologist to know if "miller" is a scientifically correct word. I know it is a common one, but "insect" would be a more exact definition in this case.

"Cluster of Bees.—A festoon of bees clinging to one another." It appears to me that there is a difference between a "cluster" and a "festoon." A cluster is a close, compact body. A festoon is open and in ring-form, usually oval rather than circular. A festoon is a cluster, I suppose, but is a cluster necessarily a festoon? I think not. "A number of bees clinging to one another," would be, to my mind, a more accurate definition.

"House—Apiary.—A building having double-walls, in which to keep several colonies of bees." Must such a building necessarily have double walls?

"Manipulation.—The handling of bees." Manipulation is operating with the hands. This word by itself is not suggestive of bees at all. Handling a shovel, or a horse is manipulation. "Bee-manipulation" is handling bees, and it is better to say so in plain terms, instead of lugging in a word of five syllables which without an accompanying adjective or other explanatory terms has no special reference to bees.

A similar criticism applies to the word "robbing" which does not by itself express the idea of robbery by bees. There has been a great deal of robbing done round apiaries by thieves destitute of wings, and not in a fair way to get any, however sweetly they may sing, "I want to be an angel."

"Spring Dwindling.—Decimation of a colony of bees in spring." Decimation is literally the destruction of a tenth part, but unfortunately spring dwindling does not stop at this. Decrease or diminution would be a better word.

Is "pollen" always "the farina of flowers?" In spring, it is frequently the farina of rye or other meal. Would it not be better to define “queen,” as “the mother bee,” instead of “the mother of the colony,” a phrase not applicable to a queen just fertilized or newly-introduced. “Wedding-flight” is not merely “an excursion of a virgin queen to meet a drone.” Vain will be the meeting, unless there be a mating.

There are a number of other words that might properly be included in the list under notice: e. g. “Bee-eater.—A bird that devours bees.” “Bee-line.—The shortest line from one place to another.” “Bee-veil.—A protection for the face and head, condemned by thick-skinned bee-keepers, but valued by the sensitive, and those liable to swell.”

“Bee-journal.—A periodical indispensible to successful bee-keeping.”

But a vocabulary of this kind is a work of time. It is not by jotting down the few words that occur to one's recollection on the spur of the moment, but by recording them from time to time in a memorandum-book, that a considerable collection can be made. If bee-keepers will be at the pains and trouble to pursue this course, and send their lists, when as complete as they can make them, to the editor of the JOURNAL, we shall bye and bye have a reference-book which will be very valuable and useful to bee-keepers generally.

Guelph, Ontario, Dec. 1, 1883.

For the American Bee Journal.

The Cause of Bee Diarrhœa.

H. V. TRAIN.

There may be many first causes operating to produce the final cause, but I believe the final cause always to be sour honey. And I do not believe that pollen ever has anything to do with it, *pro* or *con*. Sugar syrup is safe winter food if made thick, because it is not easily soured. Clover honey is safe, because it is always gathered early in the season, and gets well ripened, and hence does not sour easily.

But what causes honey to sour? That is the question; and when we have solved that, in my opinion, the whole problem of wintering is solved. For I never yet knew of a case of the disease, where I could not find sour honey in the hive; and I never found sour honey in a hive in the spring, where there was no disease in that colony.

A. R. Kohnke, on page 639 of the BEE JOURNAL for 1883, says: “Now I wish Mr. D., and such other bee-keepers as are interested in it, to experiment as to how to produce the disease at will, whenever they wish,” etc.

I do not wish, but I can produce the disease in any colony he may have, if he wishes; or I can tell him how to do it. Let him put his bees into a cellar without much circulation of air; keep the top of the hives tight, with a small entrance, and keep the temperature of his cellar below 40°, and a part of the time down to 30°, and he will have his wish sure. The reason is, if I am right, the breath of the bees will condense on the honey outside of the cluster; there is not sufficient circulation of air to dry it off; the cappings crack, more or less; the honey and water getting mixed will sour; and, fermentation once commenced, penetrates the whole mass; and when the bees eat the soured honey in confinement, they are effected.

But if the bees have well-ripened stores; a brisk circulation of air through the cellar; a large entrance to the hives; a Hill's device over the frames; with only a burlap over the device and the cover on that (I use straw matting obtained from tea chests); and then keep the temperature of the cellar from 45° to 50°, he will have neither sour honey or its effects.

This, at last, is my settled conviction, after 20 years of experimenting and close observation. I do not feel so sure as to all the conditions which causes honey to sour out-of-doors, but I do feel sure as to the conditions which causes it to sour in cellars or bee houses.

Let the above conditions be met, and I would like to insure all the bees in the United States against dysentery for 10 cents a colony. And there is another consideration: it does not cost half as much to prepare bees for the cellar, put them in and take them out, as it does to make them half as safe on the summer stands. And it does not take more than half as much honey to winter them in the cellar, under these conditions, as it does to winter them out-of-doors. A word to the wise is sufficient.

Mauston, Wis., Dec. 17, 1883.

Convention Notices.

☞ The Southeastern Michigan Bee-Keepers' Convention will be held at Adrian, Mich., in the Plymouth Church Chapel, Jan. 23, 1884; morning, afternoon and evening session.

H. D. CUTTING, *Pres.*
H. C. MARKHAM, *Sec.*

☞ The Eastern New York Bee-Keepers Union, will hold an annual Convention in the Agricultural Hall at Albany, N. Y., on Tuesday, Wednesday and Thursday, Jany. 8, 9 and 10, 1884. We invite exhibition of hives, extractors, implements for the apiary, and all apiarian supplies. Time will be given for exhibition and examination, and testimonials awarded. There will be speeches and essays on important topics from prominent apiarists, and questions on interesting subjects will be discussed. A general invitation is extended to all interested in apiculture. S. VROOMAN, *Pres.*

☞ The Marshall County Bee-Keepers' Association, will meet at the Court House, in Marshalltown, Iowa, on Saturday, Jan. 5, 1884. Subject for discussion: “Promotion of Bee-Keeping.” All are invited.

J. W. SANDERS, *Sec.*
Le Grand, Iowa.

The 15th annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 22, 23 and 24 days of January 1884.

This will be the largest and most interesting convention of bee-keepers ever held in America. Many of the most scientific apiarists in the country will take part in the discussions. The programme is completed, and comprises all the interesting topics of the day. The question box will be opened each day, and the questions answered. All are invited to send in questions.

Implements and other articles of interest for exhibition will be received and properly arranged. It will pay any bee-keeper to go a thousand miles to listen to the discussions. By hearing and seeing, you will obtain much more knowledge than by reading. Five hundred bee-keepers will be in attendance. Reduced rates of board at hotels have been secured. All are invited.

GEO. W. HOUSE, *Sec.*
W. E. CLARK, *Pres.*

☞ A meeting of bee-keepers will be held at the residence of W. Cossens, Monee, Will Co., Ills., on Monday, Jan. 28, 1884. All friends of improved management of the apiary, are invited to attend.

A. WICHERTS, }
W. COSSENS, } *Committee.*
B. HEYEN, }

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will hold its annual meeting in Temperance Hall, Freeport, Ill., on Jan. 15 and 16, 1884.

J. STEWART, *Sec.*
Rock City, Ill., Nov. 30, 1883.

☞ The 5th annual Convention of the Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will be held at Jefferson, Ohio, Jan. 16 and 17, 1884. All are cordially invited.

C. H. COON, *Sec.*
New Lyme, O., Nov. 26, 1883.

☞ Owing to the death of our Secretary, Mr. T. Brookins, please announce in the BEE JOURNAL that the annual meeting of the Champlain Valley Bee-Keepers' Association, will meet in the parlors of the Addison House, Middleburg, Vt., the second Thursday in January, 1884.

J. E. CRANE, *Pres.*

☞ The Bee-Keepers' Association of Central Illinois, will meet in Bloomington, on Jan. 9, 1884. All are cordially invited to attend.

JAS. POINDEXTER, *Sec.*

☞ A meeting of the bee-keepers of Des Moines Co., Iowa, will be held on the second Tuesday in January, at 10 a. m., for the purpose of organizing a county bee-kepers' association, at Middleton, Iowa, in R. C. Crawford's Hall. JOHN NAU, FRANK MELCHER, A. M. BALDWIN, W. R. GLANDON, *Committee.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Best Hive for Comb Honey.

Will Mr. Heddon please answer this? Which is the best hive for comb honey, 8 or 10 frame Langstroth hives? If 8 frames is best, how wide in the clear should the hive be?

H. M. CATES.

Shidler, Ind., Dec. 11, 1883.

Having tested both, I much prefer and use the 8-frame hive. I use 11½ inches in the clear, to 8 frames.

Transferring, etc.

This is my first summer with bees. My first swarm I hived myself, and, having no hive, I put them in a box, with two pieces of lath across the inside, and they have done nicely. Please to tell me how and when to get them into a hive. I am using the common two-story hive, having frames below and four square boxes in the top. What is the proper name for it? What book is best for a beginner to have?

F. H. GLEASON.

Mankato, Minn., Nov. 29, 1883.

"Modern transferring," which will be found on page 367 of the BEE JOURNAL for 1883, gives my ideas of the best method and time for transferring bees.

There are a good many kinds of 2-story hives, with frames below, and various numbers of boxes on top, and it would be difficult to give any name for a tenth part of them.

The works of Langstroth, Quinby, Cook and Newman, are worth many times their cost to the beginner.

Rack for Sections.

Please give a description of Heddon's rack in the BEE JOURNAL, to hold sections without glass. If it has been described in the JOURNAL, it is in a volume that I have not got. I think it would oblige many others as well as myself.

S. L. VAIL.

Coal Creek, Iowa.

If the case or super we use for storing honey is meant, I will say that a description will occupy too much room for this department, but in response to Miss Vail and many others, I will describe it in the columns of the BEE JOURNAL, as soon as I can get to it.

Did the Sugar kill the Bees?

I send you a package containing some sugar and dead bees. The bees have been fed upon the sugar all the fall, as they had no natural stores. My attention was attracted by a number of dead bees about the entrance of the hives. I examined the hives, but could find nothing that would solve the mystery. The combs and hives were dry and bright. The inside of the hives were not spotted, neither was the outside; the bees had evidently fallen from the combs upon the bottom of the hive, and had been dragged out of the hives by their comrades. I saw the bees bringing dead ones out, but saw none coming out as is the case where they are affected by dysentery. The sugar was sold to me for pure sugar, and I send it to you to examine it, for I fear it is glucose. I also send the bees, as I thought they would help solve the mystery.

Salem, Mo. JAMES F. JOHNSON.

I infer from your statements that there are no more bees dying in your hive, than is usual at this time of the year. If there are, I can account for it in no way unless they may be starving. Are you sure there is plenty of sugar syrup in the hives, not crystalized, but in proper condition for food? The bees show no signs of disease. The sugar, if mixed at all with grape, the mixture is too slight to injure the bees, and had they been fed entirely with grape sugar, there would be no such symptoms, especially at this time of the year, in such a winter as we have had, I do not think, though I would not advise the use of grape sugar, in whole or any part, in connection with bees, for I should expect it to give them dysentery, if fed pure, for them to subsist upon during cold and long confinement.

SELECTIONS FROM OUR LETTER BOX

Well Done.

My report for 1883 is as follows: I commenced the season with 44 colonies; increased to 105, and obtained 2,000 lbs. of comb honey, and 2,000 lbs. of extracted, mostly white clover.

WM. HEALD.

Mt. Sterling, Iowa, Dec. 20, 1883.

Excellent Report.

I started with 3 colonies of bees last spring; increased to 13, and lost 2. They gave me 150 lbs. of extracted honey, and 250 lbs. of nice comb honey. Did I do well or not?

P. E. V.

Jerseyville, Ill., Dec. 22, 1883.

[You did exceedingly well.—ED.]

Good Yield of Honey.

I had a good yield of honey during the past season, and the bees are now in splendid condition for winter.

W. W. HIPOLITE.

DeValls' Bluff, Ark., Dec. 19, 1883.

An Amateur's Report.

My report for 1883 is as follows, viz.: Spring count 2, increased by swarming to 7, found 7 bee trees and bought 5 colonies, making in all 19, which I reduced to 8 good strong colonies by uniting. I have them in the cellar, in simplicity hives. If I succeed in safely wintering them, I intend to Cyprianize by introducing Cyprian queens. I am an amateur at the business; but like it well, and if I can make it a success, I intend to build up a respectable apiary. I handle my bees without smoke or gloves. I read the BEE JOURNAL with great interest. Why do not the seedsmen or nurserymen not offer bee-keepers collections, consisting of flower seeds, which are frequented by bees, and also shrubbery, that, in ornamenting our yards and gardens with flowers, are useful as well as ornamental? I shall want something of that sort this coming spring, and if they would advertise in the BEE JOURNAL, it would no doubt pay them.

DAVID R. PHILLIPS.

Fulton, Mo.

Hives in Use in the West.

What style of hive is now mostly in use west of, say Cleveland? Has the new Langstroth hive with movable side, such as Mr. Newman had a model of in Europe in 1879, been a success? Please answer in the BEE JOURNAL.

Philadelphia, Pa. A. TODD.

[Langstroth hives are *mostly* in use in the West, and some thousands with the movable side, as mentioned above, are also used.—ED.]

Black Bees as Honey-Gatherers.

I began, in the spring, with 30 colonies of bees; 5 were very weak, and 25 fair colonies. I got 4,500 pounds of honey; 1,400 pounds in the comb, and 3,100 pounds of extracted honey; 3,900 pounds of it was basswood honey, and 600 pounds was white clover. This was the best year I ever saw for basswood honey. My bees are all blacks; they averaged 150 lbs. of honey per hive, spring count. I think they have done well for poor despised blacks. I have now 72 colonies of bees.

WM. COLEMAN.

Devizes, Ont., Dec. 18, 1883.

Wintered in a Warm Cellar.

As my last report in the JOURNAL, on June 3, predicted that swarming was near at hand, so it proved, for swarming commenced on that day, and from June 3 to June 28, 156 swarms issued from 150 colonies, all there was in the yard. Will any man say that they were not well wintered? and yet hundreds of bee-keepers will raise their hands in horror when told that this lot of bees were wintered in a temperature from 65° to 90° of heat! Bees in my other yard, wintered on the same plan, commenced swarming on June 5, and were equally as good as the one that I worked. The whole amount of comb honey was 22,000 lbs. (no extracted). I wish to say that I do not agree with Mr. Heddon in regard to pollen and dysentery. Keep the bees warm, and they can eat all the pollen they care to, and unless some of them get to breeding, you will see no signs of dysentery, and then it will be on the outside of the hive, and does no harm. It appears strange to me that a man like Mr. Heddon will still persist in wintering bees in a cool atmosphere. When I was wintering in a cool room, I was having the same trouble that so many are having now, and that was before Mr. Heddon and scores of writers ever owned a bee. Bees will winter on syrup made of coffee A sugar, in a very cool room, with no signs of dysentery, if kept in for 6 months; but I was never able to find any brood in a colony that had nothing but coffee A sugar syrup to live on; and, as there were no young bees to stir up the cluster, all were quiet. If any one has failed to have their bees winter well in a warm cellar, I have yet to hear from him. I find that bees will stand a high temperature in winter quarters and not scatter and run, providing they do not get a sniff of fresh air from the outside, either hot or cold. I have sold all my bees but the apiary that I work, 225 colonies, and they are in a cellar 17x19 feet. I expect some failures, as all were carried in that contained bees, and some of them were queenless, on the last of September, when cells were given them, and no further notice taken of them.

IRA BARBER.

De Kalb Junc., N. Y., Dec. 21, 1883.

My Season's Work With Bees.

After losing some and selling more than I really wanted to, I commenced with 6 strong and 10 very weak colonies, making 16, such as they were; they increased to 51, which went into winter quarters, strong in bees and the most of them with a surplus of honey; 5 or 6 will have to be fed; this I shall do in January. I took 1,200 ℔s. of comb honey in 2 ℔. sections and 2,400 ℔s. of extracted; no fall honey.

W. H. BALCH.

Oran, N. Y., Dec. 20, 1883.

Report of a Beginner.

I send you my first report as a bee-keeper. I commenced the spring of 1883 with 15 colonies of black bees, in fair condition. I sold 3 black colonies and bought 3 of Italians. By the process of grafting the queen-cells, I now have 16 Italian and 14 black colonies. I had about two weeks' good flow of honey from white clover, and very little from buckwheat or fall flowers. I have taken 1,000 lbs. of white clover honey, almost all in boxes, and sold it all at 15 cents per pound, and could not nearly supply the demand.

S. H. WAGGONER.

Godfrey, Ill., Dec. 18, 1883.

The Cold Wet Season.

I commenced the season with 36 colonies, increased to 75; and obtained of comb honey 500 ℔s.; extracted 600 ℔s.

JOHN HERBST.

Reese, Mich., Dec. 19, 1883.

My Report for 1883.

From the 43 colonies put up the previous fall, 37 survived. The weather was wet and cold during the entire season; even in July, when bees were working on basswood, they would fall by the thousands within a few rods of their hives, until the trees and fences were covered with bees, still they worked through the rain, for it rained incessantly every day but two, during the 16 days that basswood was in bloom. After basswood ceased, there was no more honey gathered. The 37 colonies increased to 60, and I took 700 lbs. of comb honey and 600 lbs. of extracted honey. I sold 3 colonies and 5 queens. This is the poorest honey season I have witnessed since I have kept bees, which is for 4 years.

C. E. MILLER.

Justus, Pa., Dec. 17, 1883.

Button-Bush Honey.

I have had a little experience during the past season with button-bush honey, and I do not want it repeated next August. Why did not some of our knowing ones tell us that the button-bush honey was far inferior to buckwheat honey? It is very thick, black, and stringy, and has a very sickening taste. It began to bloom immediately after basswood. I got from 10 to 30 pounds per colony from it. Two swarms that issued on July 25, nearly filled their hives from it in 2 weeks. As we cannot sell this dark comb honey, those of us who have more dark honey than we need for wintering, will have to extract the dark and sell it at 6 or 7 cents per lb., or put it away in combs for feeding in spring. As the season was so very cold, we did not get over 10 lbs. of golden-rod honey. I got from 50 to 75 pounds per colony of early honey, in combs.

R. S. BECKTELL.

Three Oaks, Mich., Dec. 19, 1883.

Honey Crop and Fertile Workers.

I commenced the season with 39 colonies; increased 15 by dividing; 33 colonies swarmed 114 times, but as I had all my queen's wings clipped, every swarm was returned. I realized from 40 colonies 1,131 lbs. of extracted honey, and 2,171 lbs. of comb honey, in 2 lb. sections. I have 25 lbs. of wax. I have sold 2,400 lbs. of honey at 15 cts. per lb., and have 902 lbs. on hand. My honey is all first-class. The past season was a strange one; there was bloom plenty, but not rich with nectar. On Nov. 7, I weighed my bees and prepared them for the coming winter on their summer stands. Each hive contains 20 to 42 lbs. net, of ripe capped honey; the 54 colonies has 1,796 lbs.; 40 colonies averaged 82½ lbs. each. Hive No. 22 has a black queen, 3 years old; I kept her drone brood out last year, and, strange to say, she had no drones this year. I took 117 lbs. of honey from her this year. No. 23 is a pure Italian; I divided her brood 3 times this year, and she gave 116 lbs. of honey, and No. 37 is a pure Syrian; I divided her brood 3 times, and she gave 108 lbs. of honey. No. 13 is a pure Syrian-Italian; I divided her brood 4 times, and she gave 104 lbs. of honey. We have had but very little cold weather here yet; on Nov. 4 it was 6° above zero, the coldest day yet. Last night it was freezing—to-day, clear and beautiful. Much has been said about fertile workers, and I find by experience, that the so-called fertile is not only a pest in queenless hives, but are just as apt to be in a hive where there is a splendid queen, as in one that is queenless, and I believe that many choice strains of bees are run down to worthless trash, by allowing the working bees to rear drones of their own weak and unnatural method. I have experimented in regard to these pests, the so-called fertile workers. I will give my experience with them soon. I have moved into the city of Kane, 5 miles southwest of my apiary. I have my apiary in the care of S. P. Ranney, the tenant on the farm. I go and visit my apiary every 3 weeks, and I believe that all my bees know me. I find a home market for all my honey; just this moment had an order for 210 lbs. I will not have honey enough to run till May; I asked myself in September, what I would do with all my honey, for some was reporting such large crops. I wish an endless life to the BEE JOURNAL, and may the time come when bee men will all be blessed with a land "flowing with milk and honey," and hot biscuit and butter.

R. M. OSBORN.

Kane, Ill., Dec. 15, 1883.

Prophesying About the Weather.

I take great pleasure in reading about the new things relating to bee-keeping, in the BEE JOURNAL; we find many through the course of a year. It takes too long to learn the many things pertaining to bee-culture with one's self, hence we must read. There is a gleam of satisfaction in all our hearts up in this country, about the past honey season. We all have some honey—it might have been worse. The summer of 1883, here, will not be remembered as a great honey season, but almost the reverse. Early frost discontinued the gathering of honey till 1884, and I am afraid a great many colonies will suspend, ere the beautiful flowers, casting their fragrance around, can invite the honey bees to come and sip the nectar sweet, from early morn till the close of day. Early in November we noticed that the thermometer indicated zero, or thereabouts, for a whole week through, and that the wind was up in proportion. Since that time we have had, generally, very fine weather, with remarkably red mornings and rosy evenings. To-day, the 18th of December, is very clear without any wind to speak of, yet the thermometer registers zero at noon. Most every one predicts that it will be a very mild winter; just what they base their notions upon, I am unable to tell. Some of these prophets also claim that we are to have an early spring. Others say "no snow this winter," yet snow fell to the depth of 3 inches last night; it may be they meant that it would not be 16 feet deep.

JOHN MORRIS.

Mauston, Wis., Dec. 18, 1883.

☞ The Ohio bee-keepers will hold their annual convention in the parlors of the Farmers' Hotel, at Columbus, O., Jan. 14, 15 and 16, 1884. All interested in bee-culture are invited. The following subjects will be discussed; "How to winter bees successfully." "Are the new races of bees a success?" "What can we do to prevent adulteration of honey?" "How to create a home market for honey." "How many colonies can be kept in one locality?" "Can we do without separators?" "Which are best, deep or shallow frames?" "What shall we do with second swarms?" "How many brood frames are necessary in a hive?" "Which is the most salable section, one-half, one or two pounds?" "Is it advisable for all bee-keepers to adopt a standard size of frame?" "What is the most desirable width of sections?"

The above questions will be discussed by eminent men, such as Rev. L. L. Langstroth, Dr. Besse, S. D. Riegel, C. F. Muth, A. I. Root, of Medina, and others, and in addition to the above, Prof. Lizenby, of the Ohio University, will deliver a lecture on "Honey-producing plants:" also Mrs. Jennie Culp will read an essay.

C. M. KINGSBURY, *Sec.*

☞ Notice is hereby given that the Nebraska State Bee-Keepers' Association will meet in annual session at Lincoln, Neb., Wednesday, Jan. 9, 1884, at 2 p.m., in the Y.M.C.A. rooms on Tenth street, between O. and P., just east of the Government Square.

We have the promise of some eminent apiarists from other States to be with us, and also expect to have one of the largest displays of apiarian supplies ever gathered together in the State. Each person attending, is requested to bring something to exhibit or show, to the edification of bee-keepers and others. Past members are earnestly requested to renew their membership, and all others are cordially invited to come in with us.

The ladies having been well represented at our past meetings, we certainly expect a larger attendance this session than ever before. All those not attending will surely miss a good time, for we expect the largest gathering, and also the most enthusiastic meeting of practical bee-keepers ever held west of the Mississippi river.

We have succeeded in making very satisfactory hotel arrangements. Two dollar hotels have offered $1 rates. All bee-keepers desiring to attend can obtain certificates entitling them to excursion rates over the B. & M. and U. P. railroads by applying at any time previous to Jan. 6, to M. L. Trester, Secretary of Nebraska Bee-Keepers' Association, Greenwood. Please apply immediately.

M. L. TRESTER, *Sec.*
T. L. VAN DORN, *Pres.*

☞ The annual meeting of the Indiana bee-keepers will be held at Indianapolis, Jan. 15 and 16, in the Agricultural rooms corner of Tennessee and market streets. A cordial invitation is extended to all.

F. L. DOUGHERTY, *Sec.*

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

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How to Create a Market for Honey.

We have now published another edition of the pamphlet on "Honey as Food and Medicine," with more *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit. Try it, and you will be surprised.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Our New List of Premiums.

Getting up Clubs for 1884.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ A correspondent asks if any one may select a Binder for the BEE JOURNAL, among the books given as Premiums for getting subscribers we reply, yes; any book or binder we keep for sale, may be selected by those who get up clubs.

"HER SECOND LOVE," Ashford Owen's latest novel, just published by T. B. Peterson & Brothers, Philadelphia, Pa., should take the reading public by storm, for a better or more interesting love story is not to be found in print. It handles a delicate subject in a masterly manner, and lays bare the inmost workings of a young girl's heart with a minuteness absolutely unparalleled. Its perusal will not hurt any one, old or young, and its capacity to do good is simply enormous. It is published in a large square duodecimo volume, in uniform style with Mrs. Burnett's works, price 50 cents in paper cover, or bound in morocco cloth, price One Dollar.

◆

☞ As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the BEE JOURNAL, on the first page of this paper.

◆

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

◆

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or in cloth for $3.00.

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Advertisers' Opinion.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.

E. A. THOMAS & Co.
Coleraine, Mass., July 18, 1883.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

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☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

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Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

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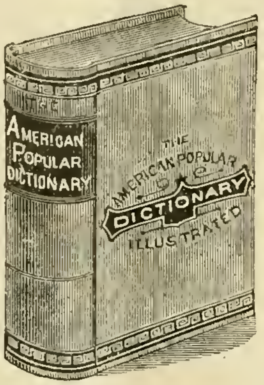
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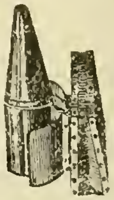

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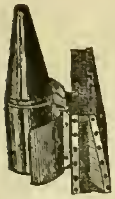

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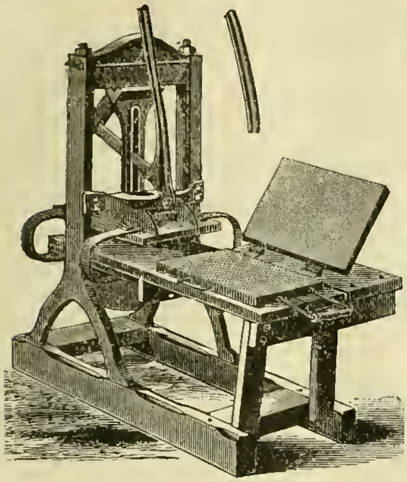

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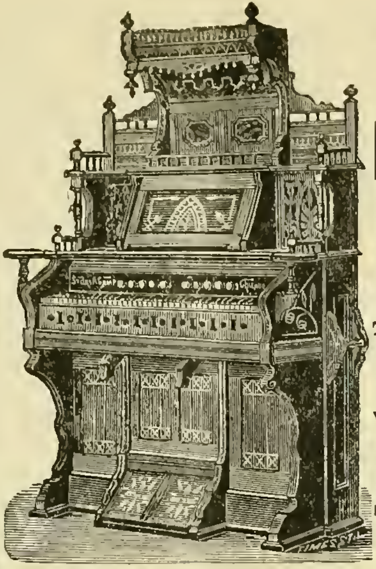

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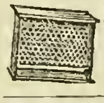

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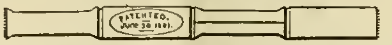

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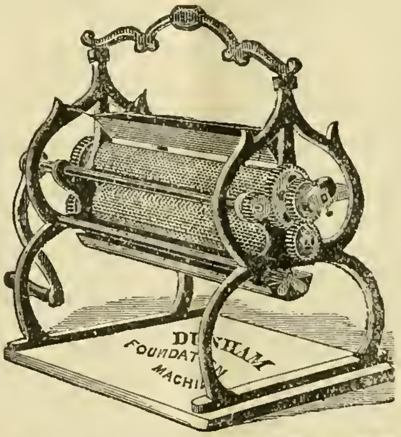

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ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861. Chicago, Ill., January 9, 1884. VOL. XX. No. 2.

THE WEEKLY EDITION OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

925 WEST MADISON ST., CHICAGO, ILL.

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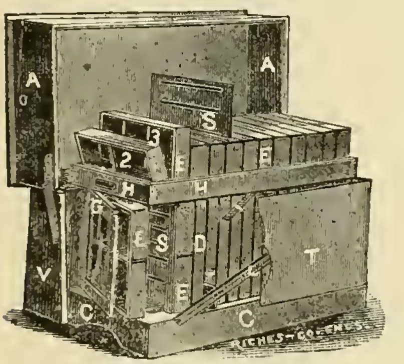

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Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Arſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JANUARY 9, 1884. No. 2.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Harmless Adulteration.

A correspondent has sent us the following from the *Toledo Blade* of Dec. 27, 1883:

> A writer in the *Scientific American* demonstrates that while glucose is found in almost all sugars and syrups, no matter how pure they are declared to be, the adulteration is yet a perfectly harmless one. People may partake of it all their lives and yet live to a good old age. It is a pity that the same could not be said of all adulterations.

We saw the article in question in the *Scientific American;* but we concluded it was too *absurd* to merit any notice; being evidently written in the interest of that fraud—glucose—by some ignoramus.

The *Canner and Grocer* gives our views on the subject exactly, in the following language: "Adulteration is the thief of trade. More tempting than Delilah, for it woos with promises of golden gains; it finds numberless lovers among those who deal in the staple-food articles of commerce, and lures them on from bad to worse, until finally they become hopelessly entangled in a net-work of dishonest practices. Under our at present imperfect laws for protection against the sale of spurious goods, with but slight danger of detection, and with a certainty of large profit, many a dealer, finding his keener sense of honor dulled by money greed, begins to adulterate the commodities he keeps for sale, and thus enters into a career that is more villainous and more dangerous to the community than that of the old-time highwayman; for through it the public are robbed not only of their coin, but of their health as well. This infamous system has been growing of late with frightful rapidity until one is in almost perpetual fear lest he be eating or drinking some poisonous compound instead of the healthful article which it counterfeits."

An exchange aptly remarks that it "would be better, for instance, that the courts should punish burglars even to the verge of inquisitorial persecution, and at the same time allow sneak thieves to go unprosecuted, than that they should, for the sake of ill-named justice, allow both of these rascally classes to go unscathed. Every case of adulteration punished is a victory gained for honest trade in general, no matter from what branch of business the offenders may have been selected." Adulteration of all kinds should be always strongly condemned by every honest person.

◆

☞ Those who have become acquainted with our youngest daughter, (known to many as "Little Sunshine") will be interested in the following, from the Chicago *Inter-Ocean* of Sunday, Dec. 30, 1883:

> Wednesday evening at the residence of Mr. and Mrs. T. G. Newman, No. 147 Western Avenue, a very pleasant affair occurred, the occasion being the marriage of their daughter, Matie, to Fred H. Chenoweth, the Rev. Luther Pardee officiating. None but relatives were present. After receiving congratulations the bride and groom led the way to the dining-room where a bountiful repast was spread. The house was tastefully decorated with evergreens, smilax, and flowers. The bride was attired in cream-white grosgrain silk, with Spanish lace over-dress, the bridal veil being held in place by natural flowers. The presents were both numerous and elegant. Amid the good wishes of all present Mr. and Mrs. Chenoweth left for a two weeks' trip south, and upon their return will be at home to their friends at No. 147 Western Avenue.

◆

☞ *The Bee-Keepers' Magazine*, published by King & Aspinwall, at 14 Park Place, New York, has been reduced in price to $1 a year, and is printed with new type, on nice paper, with a new cover. The Poultry department has been dropped, and it now confines its attention to the interests of honey producers. They will send a sample free to any address.

◆

☞ The *Sun*, of Alfred Centre, N. Y., says that Mr. Clark Rogers has, "from 90 colonies, spring count, crated and sent off this season, 4,895 pounds of honey, and has sold and on hand for home market, 1,100 pounds, 400 pounds of which was extracted to give the queens room. He has now 159 colonies in winter quarters." Mr. Rogers is a progressive and successful apiarist, and one of the oldest subscribers to the BEE JOURNAL, and, of course, was successful, even in a poor season, as was the one just passed.

◆

☞ The *Dairy and Farm Journal* of West Liberty, Iowa, remarks as follows concerning the value of literature to honey-producers:

> The BEE JOURNAL is almost indispensible to the successful manipulation of the industrious and persevering little insects. It is true we have often seen honey produced under the management of parties who knew apparently little more on the subject than that the bees gathered the honey and deposit it in the hive; but we have never seen any sort of farm stock managed extensively and in any sense successfully, where the manager did not avail himself of all the information, pertaining to his specialty, that he could readily obtain; and the BEE JOURNAL is worth many times the subscription price to every person owning an apiary, who reads it carefully.

◆

☞ Up to Dec. 15 the weather was beautiful and mild, then it became cold and snow appeared—but since the new year dawned, the mercury has been dancing about between 20° and 40° below zero. It will be difficult to find the men now who have, during the fall, been prophesying that the winter would be "open, mild and snowless." The predictions were based upon the antics of the festive wood chuck and the odorous musk rats. It is cold enough now to satisfy a Greenlander.

Local Convention Directory.

1884. *Time and place of Meeting.*

Jan. 9.—Nebraska State, at Lincoln, Neb.
M. L. Trester, Sec.

Jan. 8.—De Moines Co., at Middleton, Iowa.

Jan. 8.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.

Jan. 8-10.—Eastern New York, at Albany, N. Y.
S. Vrooman, Pres.

Jan. 9.—Central Illinois, at Bloomington, Ill.
Jas. Poindexter, Sec.

Jan. 10.—Champlain Valley, at Middleburg, Vt.
J. E. Crane, Pres.

Jan. 14, 15, 16.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.

Jan. 15, 16.—Indiana State, at Indianapolis, Ind.
F. L. Dougherty, Sec.

Jan. 15, 16.—N. W. Ills., & S. W. Wis., at Freeport.
J. Stewart, Sec., Rock City, Ill.

Jan. 16, 17.—N.E. Ohio, and N.W.Pa., at Jefferson, O.
C. H. Coon, Sec., New Lyme, Ohio.

Jan. 22-24.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.

Jan 23.—S. E. Mich., at Adrian, Mich.
H. C. Markham, Sec.

Jan. 24.—Mahoning Valley, at Newton Falls.
E. W. Turner, Sec.

Jan. 28.—Bee-Keepers' meeting at Monee, Ills.
A. Wicherts, W. Cossens, B. Heyen, Com.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Preparing Bees for Winter.

Mrs. L. Harrison thus describes the preparation of her bees for winter, in the *Prairie Farmer:*

We have heretofore wintered our bees in the open air, but this fall we thought we would try a part in the cellar. With this end in view the cellar was renovated and white-washed, and a partition put across one end, making a nice apartment for bees. Sub-earth ventilation was furnished by means of six-inch tile, and upward ventilation through a window hung on hinges, to be opened and closed at pleasure. Many persons were prophesying a mild winter, and we began to think that we should have no use for our bee-cellar, for when we contemplated storing them, the weather would change mild and they would be on the wing. They flew on the 8th of December, and one-half of them were put in the cellar the 15th. It was then snowing and has continued at intervals since; and this morning (17th) the thermometer was in the neighborhood of zero out of doors, and 40 in the bees' apartment.

When the bees were removed from the summer stands to the cellar the entrances to the hives were closed by stuffing in cotton rags. These were left in the first night, and the cellar window open, so that it would be cold, causing them to cluster, when the entrances were opened; then the window was closed and darkened. We shall aim to keep the temperature not lower than 40, nor higher than 45°, as this is what is recommended by those who have wintered their bees in cellars many consecutive winters.

The bees in the cellar have Hill's devices upon the frames, and then covered with unbleached muslin. To prevent the bees coming up under the muslin, a hot flat-iron was run around the top of the hive to melt the propolis and stick it fast. When the bees were put in the cellar little comforts made of thin muslin and new wadding were spread upon the muslin, and the hives were piled one upon another, with sticks at each end for the hive to rest upon, so as not to crush down the devices. The upper tiers of hives have on chaff cushions. The bees that are wintering upon their summer stands have on Hill's devices and muslin, like those in the cellar, and chaff cushions in the caps and the entrances open; upward ventilation is given above the cushions to keep them dry.

MRS. L. HARRISON.

Convention Notices.

☞ The Southeastern Michigan Bee-Keepers' Convention will be held at Adrian, Mich., in the Plymouth Church Chapel, Jan. 23, 1884; morning, afternoon and evening session.

H. D. CUTTING, *Pres.*
H. C. MARKHAM, *Sec.*

☞ The annual meeting of the Indiana bee-keepers will be held at Indianapolis, Jan. 15 and 16, in the Agricultural rooms corner of Tennessee and market streets. A cordial invitation is extended to all.

F. L. DOUGHERTY, *Sec.*

The 15th annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 22, 23 and 24 days of January 1884.

This will be the largest and most interesting convention of bee-keepers ever held in America. Many of the most scientific apiarists in the country will take part in the discussions. The programme is completed, and comprises all the interesting topics of the day. The question box will be opened each day, and the questions answered. All are invited to send in questions.

Implements and other articles of interest for exhibition will be received and properly arranged. It will pay any bee-keeper to go a thousand miles to listen to the discussions. By hearing and seeing, you will obtain much more knowledge than by reading. Five hundred bee-keepers will be in attendance. Reduced rates of board at hotels have been secured. All are invited.

GEO. W. HOUSE, *Sec.*
W. E. CLARK, *Pres.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will hold its annual meeting in Temperance Hall, Freeport, Ill., on Jan. 15 and 16, 1884.

J. STEWART, *Sec.*
Rock City, Ill., Nov. 30, 1883.

☞ The Mahoning Valley Bee-Keepers' Association, will be held in the Town Hall at Newton Falls, on Thursday, Jan. 24, 1884. As this is the meeting to elect officers, every member and all interested in the production and sale of honey, are requested to be present. E. W. TURNER, *Sec.*

☞ A meeting of bee-keepers will be held at the residence of W. Cossens, Monee, Will Co., Ills., on Monday, Jan. 28, 1884. All friends of improved management of the apiary, are invited to attend.

A. WICHERTS, }
W. COSSENS, } *Committee.*
B. HEYEN, }

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Jan. 7, 1884. }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no excitement in the honey market. The demand for extracted honey is improving, but supplies being large, prices keep down. It brings 7@10c. on arrival. Arrivals of comb honey and demand for it, are in fair proportion. A choice article in ½ lb. sections brings 20c. per lb. from store, and 16@18c. on arrival.

BEESWAX—Scarce; brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@22c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@9½c.; dark, 8@9c.

BEESWAX—Prime yellow, 27@29 c.

H.K. & F.B THURBER & Co.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—No change to note since last report. Prices and demand well sustained, and receipts about equal to shipments. White comb, 1 and 2 lb. sections, 17@18c. Extracted, 8@10c.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Offerings are mostly extracted, for which the market is dull and weak. Choice comb is in very light supply. White to extra white comb, 15@20c.; dark to good, 9@11c.; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Comb, 13@18c.; strained and extracted, 7@8c.

BEESWAX—Firmer, at 30@31c.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.

BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is rather dull, and supply more than exceeds the demand; would not advise shipments to this market. 2 lb. comb, 16@18c.; 1 lb. comb, 18@20c.; extracted, 8@10c.

BEESWAX—32@35c.

BLAKE & RIPLEY, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

Prevention of Swarming.

JAMES HEDDON.

After 15 years' experience as a specialist in bee-keeping, I need not tell you that I have tried very many methods to prevent swarming; among them, various methods of artificial increase.

I have become satisfied that *no* method of artificial increase, is productive of as good result, as is natural swarming, all things considered. Bearing me out in this conclusion, is the practice of Messrs. Oatman, Hutchinson, Miller and numerous other large and practical honey producers.

I may also cite you to the fact that we have no practically successful method for the prevention of swarming, as no such method is in use among our leading producers. Nor do I wish to *prevent* natural swarming, but I would like to control it, there being one condition of our affairs, and perhaps only this one, wherein the benefits would more than counterbalance the expense and trouble arising from the use of the necessary fixtures. The one referred to, is where one has too few bees in a given locality, to afford to keep a hand to watch them continually through the swarming period.

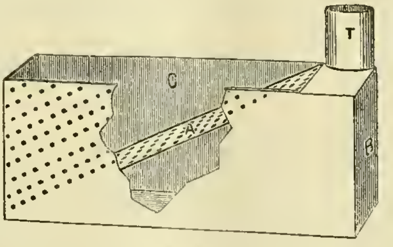
Having begun bee keeping in connection with a careful perusal of Father Langstroth's invaluable work, (for which I am to-day very glad) my attention was early called to the idea of compelling bees to act differently from their wont, by virtue of the difference in size of the three genders inhabiting the hive. The book told us of contracted passages, that would exclude the queen and drones, while the workers would pass through. My experiments upon the principle, disappointed me from the fact that any passage-way contracted sufficiently to prevent the egress of the queen, acted as a hindrance to the ingress of heavily laden workers. More especially was this a fact with workers laden with both honey and pollen, and often loads of pollen would be detached from the legs of the bees, in their passage through the contracted spaces. Now I have seen this pollen dislodgment take place in spaces that did pass some of the smaller specimens of unfecundated queens, and I once purchased of Mr. Oatman one of the most valuable fertile queens I ever owned in my life; valuable because she produced a goodly number of most excellent working bees, of above average size, though she herself was black and so small that she passed the spaces mentioned above. Another objection to these spaces, or bee guards, as they are sometimes called, is, that they seriously interfere with the ventilation of the hive, and general satisfaction of the workers, keeping up confusion among the thirsty perishing drones, clogging up and buzzing at the entrance for escape.

Since the advent of comb foundation and consequent control of drone production, this evil is almost entirely removed, with all our colonies except such as we use to rear the drones of our choice.

Such guards are often advocated for their usefulness in prohibiting the flight of drones, from box or other recently purchased hives. I have what I think a better method of disposing of this difficulty. I transfer such hives before time for the mating of queens, shaking their bees (all except the queens and a few workers) into a box whose end is made of perforated tin, with round holes large enough to pass the workers freely, but keep back the drones. The workers quickly return to their queen, while the deserted imprisoned drones are easily destroyed.

I will now endeavor to describe an arrangement I invented some 10 or 12 years ago, and laid aside as impracticable. Why impracticable? Mainly because of the trouble with the drones above mentioned, especially in hives where they were more numerous.

Another point; as I had but one apiary at the time, (making bee keeping a specialty) and had not the where-with to establish another, the need of such an attachment was not felt by me then.



Heddon's Non-Swarming Attachment.

In viewing the above cut, imagine yourself looking at a tin box, 14x6x4, with both sides open. (In the cut, one side is up, and the other down.) You see an angling partition A passing from one corner of the tin box to within two inches of the other. This closes the opening through the box, except the space 2x4. This space is closed by a piece of tin 2x3⅝, and the remaining opening, 2x⅜ has a flat tube T of the same dimensions and about 2½ inches long, open at each end. The partition A, and all of that part of the box above the partition, and on the side towards you, is perforated with round holes made with a punch, with the bur projecting on the outside. The holes are made just large enough to freely pass a worker bee when empty, and as there is no necessity for laden bees to pass these holes, they can be somewhat smaller than the ordinary contracted passages, and too small to admit of the passage of one unfertile queen out of one thousand. This attachment I made when I used the 10-frame Standard Langstroth hive with portico. To adapt it to my present hive whose inside dimensions across the frames is 11½ inches, let us imagine it 12 inches long, instead of 14 inches, and the left end (as you face it) also perforated.* To adjust it to the hive we lay the side C on the alighting board, shove it up tightly to the hive, pushing the tube T into the entrance and under the bottom bar of the side frame.

The perforations are thickly located; in fact "the tin is most all holes." Now let us describe the actions of the bees, as we have watched them many an hour. A worker starts out to the field, he rushes to the entrance, looks at the new obstacle, accepts the invitation given him by the division A to pass to the right, goes down near the corner, slips easily through the hole, takes a look at the new order of things, sees that he is in the right church, that the *pew* is only newly ornamented, and strikes out for the field. Another, and another, and another, follow in rapid succession, all passing out near the corner, induced by the position of the angling partition A. The inner end of the tube T, being within the hive and quite dark comparatively, only about one worker in one hundred, passes out through it; besides it is constantly in use, by those passing in.

By this time the "nectar-laden bees" begin to return. Of course they propose to enter at the point of exit. They look at the holes. Sometimes stick their heads into one. The "grain" of this hole, you remember runs the wrong way, besides it is so small as to be poorly adapted to the tired and swollen bodied laden worker, even if passed the other way.†

Once again the angling partition invites the little visitor to the right, which invitation he *immediately* accepts and passes through the tube T. You will readily conceive that this tube is large enough to admit of the passage of the working force of the strongest colony, because the current flows *all one way*. (I think we used a tapering tube, it being only about 1½ or 1¼ inches wide at the inner end.) In two or three hours, the bees seem to have perfectly learned the attachment, and accept it cheerfully, almost the entire force passing out and in at the respective places designed for egress and ingress.

I had 40 pounds of surplus comb honey stored through this attachment, and could discover no retarding influence connected with it. It was laid aside as mentioned above, because of the drone difficulty, making it necessary to remove the dead drones every few days, before they might decompose. But it is my opinion that with this difficulty mainly removed, this attachment may become practical. I am quite certain that it stands to-day as the most perfect non-swarming attachment yet known to the public. You will notice how I combined the close passage principle, with the principle utilized by the use of Mr. Langstroth's entrance blocks, better regulators than which never have been, and probably never will be devised.

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* Of course there is no necessity for that part of the attachment, outside of the angling partition, A. It serves as a small portico, when the attachment is in use.

† When the bees swarmed through the attachment, there was a tugging and squeezing of those fullest of honey, and many of this class failed to pass through—even their thorax seemed to be distended, when they were heavily loaded. The queen jumps and buzzes about in the attachment, till she gets disgusted, and returns to the brood. If a piece of tin be slipped between the attachment and hive, the former may then be removed with the queen.

I consider the inventions of this great man, inventions of over 20 years standing, yet ahead of the age, or of bee-keepers in general.

Dowagiac, Mich., Dec. 24, 1883.

For the American Bee Journal.

Fixed Frames.

J. E. POND, JR.

In the BEE JOURNAL for Nov. 14, 1883, page 575, in an article by A. Webster, I find this sentence. "Of the improvements of the past, movable comb frames must be retained, but of an entirely different construction from those now in common use; and should be *fixed*, and reversible, as well as movable." I do not know Mr. W. nor the amount of experience in manipulation he has had during the 25 years he has kept bees, but I do certainly make issue with him on the question of construction of frames, and particularly in the matter of so constructing them as to make them *fixed*. The only frame that can be of any real value to the apiarist, is a sectional, hanging, movable frame, that is so far from being *fixed*, that. notwithstanding the inequalities of surface in the face of the combs, either in waviness or thickness, that it may at any and all times be interchangeable with any other, and in every hive in the apiary. By this plan alone can we be able to perform our labors speedily, and without injury to our bees. One of the principle points in favor of the Langstroth frames, (and by this I do not mean the standard Langstroth particularly, but any form of Langstroth frame) is that they are interchangeable; so much so, that no matter what their position in the hive relative to each other, they can be replaced after being removed without regard to the position they originally occupied. To be enabled to do this must be recognized as an immense advantage, and must allow the operator to perform much more work, and in equally as effective form, than he could possibly do were he obliged to carefully replace each frame in the particular position from which he removed it. Again in order to have fixed frames, one of two things must happen: either the frames must be close fitting at tops or ends, or else some arrangement must be made by which the frames can be held in one particular position only. Either of these plans it seems to me would cause far more labor than is needed with unfixed frames to say nothing of the liability of killing bees with close topped or close ended frames, and the liability or having the bees make them fixtures in reality by a free use of propolis. I have used the American frame, and the first objection I found with it was the close fitting top. This renders a side opening hive necessary, and I must be able to remove any frame at pleasure, without being obliged to remove some or all of the others first. In order to have a set of frames fixed it becomes necessary to have them spaced evenly, and all apiarists of experience know that while this idea may be beautiful in theory. it is absolutely impossible in practice, without making a large amount of labor necessary, at a time when it can illy be afforded. The nearer we come to nature the nearer we are to the right. Now I claim that frames are not natural, and are a disadvantage rather than an advantage to the bees; we use them as an improvement for ourselves, and in using them we should follow nature as closely as possible. Now to follow nature closely, we must make our frames of such form that the bees can perambulate over, under. and around them, and this we cannot do if we have them fixed. without a loss to ourselves in some other important particular. But I need not follow out this idea further. I have not written as I have in a fault-finding or captious spirit, but simply for the purpose of drawing out from Mr. W. the whys and the wherefores of his fixed frame idea. He may give reasons that will commend themselves to us all, but till he does so, I shall claim that fixed frames are a positive disadvantage.

Foxboro, Mass., Dec. 25, 1883.

For the American Bee Journal.

Come Over to Macedonia and Help Us.

J. HASBROUCK.

DEAR JOURNAL.—You recommended to us a short time ago some missionary work in a dark corner of our state and while I have been planning how to undertake it, I have accidentally found demand for all my efforts nearer home. It happened on this wise. You must know that I have found out that it is best, in the home market, to select with care the grocers whom you allow to handle your honey. Well, in hunting for an additional man of the right kind the other day at our country town, I went to see a grocer who had been recommended to me as having a large trade in honey. I found that he had a stock, of which he handed me down some to look at, remarking that one lot granulated in jelly-cups, although labelled "honey," with the name of an enterprising bee-keeper of this county, was some "stuff" fed to bees and then "slung" out by a "patent machine."

I concluded my opportunity for mission work had come and so I told him, that we, who write for the bee papers. had said over and over again that the granulating was the best test of purity. The heathen told me, "that shows you don't know anything about it."

I told him that Mr. L. C. Root, who had made a book about bees and honey. had just been saying that there wasn't anything—not even glucose—which could be fed to bees with any profit. I told him I was at a loss to see the use of the bees in the operation—that I thought he or some other man who didn't keep bees could put the "stuff" directly into the jelly-cups, if there was any money in the business, and that the bee-keeper who had to support the bees and do all the useless labor of first giving the "stuff" to them and then taking it away again could not compete with him.

He then handed down some liquid honey and said that was the genuine article that all his customers would rather give 20c for, than 10c for the other. It bore the label of a gentleman near the village containing a "notice" to this effect: "The producer wants it distinctly understood that this is *drained* honey and not extracted. Extracted honey is a cheap article fed to bees in patent combs, and afterward slung out by a patent machine, when it soon becomes sour and unfit for use." Isn't that depravity for you? Well as soon as I recovered my equinimity, I labored long and patiently with that man to convince him that extracted honey was a much cleaner, and if properly ripened, nicer article than drained honey, but all to no effect. He insisted that extracted honey and any honey that would granulate would not sell. He had tried it many times and always with the same result. I'm discouraged. Send me Dadant or some of your pamphlets—honey as food and medicine.

On the "hint" of Mr. Shankland, I will amend the report of the N. J. and E. B. K. A.. by adding that the meeting was held in New York—New Jersey you know is only the garden patch to the great city, and that the president *is* G. W. Thompson, of Stelton, N. J., and a great bee-man he is too, I tell you. When I visited him last, about two years ago, he had 70 colonies—not a hybrid colony among them—in the finest looking apiary I ever saw, which is managed entirely I believe by his accomplished daughter, who beats us all in charming those new races, and making them roll in the honey. Mr. Thompson is a man, whose acquaintance, if once enjoyed. no bee-keeper, at this time, especially if he is young and stirring and good looking, can afford to neglect.

Bound Brook, N. J., Dec. 20, 1883.

Translated by Arthur Todd.

A Method to Cure Foul Brood.

GEORGES DE LAYENS.

In the spring of the year 1883, I inspected several of the hives surrounding my apiary, in order to be thoroughly aware of the state my neighboring colonies were in.

In an apiary of 5 colonies, all in frame hives, one had foul brood very badly; I transferred the bees into a new hive without any combs, and fed them with a syrup mixed with acid, and the colony appears to have been perfectly cured.

In another apiary of 20 colonies all in common straw skeps, 4 died this spring of the disease.

A third apiary of 25 colonies was also attacked; of which 4 were so bad that I advised the proprietor to utterly destroy bees, combs and hives. Last autumn my apiary appeared to be in good condition, after the destruction in the spring time of several colonies, and the complete cure of two others to which I applied the above mentioned method of treatment. This spring, these two colonies appeared to be in good order, but 6 other colonies were attacked. It is very difficult to fix on the moment when a colony is actually attacked with the disease, and when the apiary is located in a country where foul brood is raging, it seems hardly possible to me to preserve it.

If it becomes necessary after a complete cure to commence again each year and feed every colony with an acidified syrup, either in spring or autumn, this would be impracticable, for, if we provoke egg laying too early or too late in the season, it offers many inconveniences and may even be dangerous to the welfare of the colonies.

We have then to seek for other methods to prevent the disease, or to stop it as soon as there are any signs of germs having been introduced into the hives.

We have then to set ourselves this problem: "To find a method at once rapid and economical, by the aid of which the bees may introduce into the nourishment of the larvæ, a minute quantity of acid in order to constantly neutralize the germs of the disease, without however in any way disturbing the natural order or their daily labors."

The experiences of this year seem conclusive, and make me hope for a complete success in the future. To obtain this result I have kept the water reservoir where my bees go to get their supply, charged with water mixed with salicylic acid. I dissolved 50 grammes of salicylic acid in 400 grammes of alcohol, and for each liter of water I added 10 grammes of the above solution. This dose is about double that generally recommended to be used in syrup. The consumption of water has been, on the average, 3 to 4 liters. On certain days in cold weather, it seemed to me that the water had a gelatinous appearance, but the bees sucked up the moisture from the cloth covering the tank, and all seemed to go well. This treatment lasted for 7 weeks, but in reality the *greatest honey flow* will prevent the bees going to the reservoir for at least 10 days, and they return to it only when the flow of honey slackens.

I had in the spring 6 colonies more or less affected. Three of these I treated by the first described method. I left the other 3 for experiment's sake in the condition they were in.

After 7 weeks of this general "water cure" I examined the 6 colonies very minutely, every frame of brood being carried into a warm room, in the order that they held in the hives.

The other colonies in the apiary were all examined frame by frame, and none appeared attacked, the disease having probably been killed everywhere, immediately it showed itself.

Egg laying in spring is always very regular because the queen finds plenty of room free of honey; one can then easily follow its progress at this period.

In examining the combs of brood of the 3 colonies to which I had given no special treatment, I remarked at first a large quantity of brood, on the first frame, diseased. This comb was the one on which the queen commenced her spring laying. The two other combs, to the right and left of this one, were also sadly diseased; the 4th and 5th commence to be much less so; in their centers many bees had come out of the cells, but there were still a certain number of cells isolated that were diseased. In the circle of brood (sealed) surrounding the portion empty of brood, I met with very little of the disease, and at last the combs, farthest out from the frame on which the queen commenced her spring laying, did not appear to contain a single diseased cell.

The disease instead of going on increasing, as is usual, had diminished progressively. I took away all infected combs from these 3 hives, and commenced feeding them with acidulated syrup. The three other colonies transferred to new hives appeared in good condition. At moment of writing, my apiary appears cured just by this retrograde action of the disease, and I have every hope that it will continue the same until autumn. I will continue the "water cure" right up to the end of the season, and propose to continue this treatment in the surrounding country, until the disease has disappeared from my neighborhood.

For the American Bee Journal.

Cyprian and Hybrid Bees.

P. BOLLINGER.

As I have found both pleasure and profit from the weekly visits of your valuable JOURNAL, during the past two years, I am anxious still to have its company for another year. Its timely hints and well written articles on the many topics of practical and theoretical apiculture, coming weekly and thus in season, more than pays its price above a monthly journal of equal merit in other respects. The old adage "a stitch in time saves nine," may be true, and a little knowledge in time may save its thousands—of bees, most surely. Perhaps a few thoughts of my own experience in bee-keeping may interest some of your many readers.

Most of my bees are Cyprians, or a cross between the three races. I have a few Italian queens which I received last year from W. Z. Hutchinson, Rogerville, Mich. Two years ago I purchased two Cyprian queens of E. M. Hayhurst, Kansas City, Mo. Nearly all my bees at this time were the German bees except one or two hybrid colonies with black queens mated with drones, the progeny of an Italian fertile or laying worker.

In the summer of 1882 I reared queens from my best Cyprian colony and superseded many of my old brown queens. So by Cyprianizing and hybridizing it is hard to tell just what strain of bees I have. But I think I can tell a grand difference in the amount of honey I get. I work almost entirely for extracted honey.

In June, the creek near my apiary overflowed and all my bees were afloat; some 5 colonies washed away, and all were damaged. This occurred Friday night June 25, as near as I remember; and by having plenty of help at hand, we placed 30 colonies above the flood, wherever we could find a convenient place to put them. Next day I put them on stands above high water mark, and well, for on Sunday morning the creek overflowed her banks again. Previous to this summer this stream had overflowed its banks here but once in 26 years. On Monday, June 27, we had 30 colonies, many of them very weak, by drowning. There was no honey in the flowers till about Aug. 1. I had to feed them till near the last of July. In August the honey harvest began from heartsease and continued till frost, the 1st of October. We extracted 2,500 lbs. of honey and increased to 57 colonies. I will need to feed most of my late swarms to get them through the winter.

To give you an idea of the rapidity with which the Cyrian bees increase, I will relate what Mr. Wm. L. Clark, of Vesta, Neb., has done from one colony which I sold him last spring. Mr. Clark divided this colony in July and then let them increase by natural swarming. In the spring, when I let him have the bees, he said he aimed to run for increase, and I think he has succeeded. I told him the Cyprians were the bees, if he desired increase. He increased to 13 colonies from 1, and says they are in good condition for winter, and he also got 200 lbs. of surplus honey. He says he knows that two swarms at least absconded.

This may be questioned by some, but I am well acquainted with Mr. Clark and saw his apiary the other day; they are placed close together and protected from the north-west wind. I did not examine them, but propose visiting him in the spring and make a careful examination of his bees. He has promised me the old queen back again, and if she has not layed her queenship out, I aim to begin early and feed if necessary and see just what can be done in one season. I may have many queens just as profitable but this one is "a tested queen."

Adams, Neb., Dec. 28, 1883.

For the American Bee Journal.

Diphtheria—Death—Hygiene.

ALLEN PRINGLE.

This is a strange medley of subjects for a single article, and I make use of it to attract the reader's attention, for I want every reader of the AMERICAN BEE JOURNAL to read this, especially those who have children whom they are liable to lose forever by that dread, fatal disease, diphtheria.

I am pained at reading on page 619, No. 49 of the JOURNAL, Mr. Fredenburg's touching letter about the death of his two dear little boys from diphtheria; and the thought at once forces itself upon me, as it has many times before, is this fearful mortality from this dread disease *necessary?* Is it inevitable? I think not. Indeed, I know it is not. Of course I know it is inevitable under the fatal circumstances, but the circumstances can be changed, and hence the fatal results changed from death to recovery. I unhesitatingly affirm (and I know whereof I affirm) that nineteen out of every twenty of those children who die of diphtheria could be saved by simple, common-sense, home treatment without a doctor at all. The Allopathic or drug treatment of this disease is nearly always fatal. I am not a physician by profession, but I have studied the whole of the popular (and unpopular) medical systems and understand the principles upon which they are based, especially the popular Drug system and the, as yet, unpopular Hygienic system. I have no axes to grind one way or another. I have no interest in any of them except to know the truth. I studied them and studied the science of health, as embraced in physiology and hygiene, for my own physical preservation and the physical good of those over whom I might have influence and those dependent upon me. The consequence is that for 25 years I have not taken a particle of medicine of any kind; and have been quite free from sickness. And this uniformly good health and exemption from sickness has not been due to an unusually strong and vigorous constitution, which, unfortunately I never possessed. Indeed it was just the reverse of this in youth, coupled with certain predispositions to disease, that impelled me to look into and study the subject of health and master the conditions upon which it depends. No medicines—patent or professional, quack or regular—are used in our family; no doctors are employed to medicate with drugs. Our habits are simple and natural and we reap the reward in good health. Physically speaking, the *real*, natural needs of human beings are few and simple; the artificial and imaginary ones are many and complicated. Children are not reared according to nature, but according to the false and unnatural conventionalities of society; and the consequence of this is physical infirmities and moral obliquities. Our only child—now about 10 years of age—has never tasted a single drop of medicine of any kind—not even the simple remedies in common domestic use; and has always been free from sickness with, of course, the exception of the contagious diseases incident to childhood and youth, such as whooping cough, mumps, etc.

The reader will, I am sure, pardon me for so much personal allusion when he considers that I am writing this with a motive to possibly benefit some who may need instruction and admonition of this kind. It is a well known fact in human nature that to some minds personal facts and experience on any subject are all-convincing; while to others the principles upon which the experience and practice are predicated must be presented and established. The latter class of thinkers look below the surface at the foundations and fundamentals; while the former are content with superficial appearances and *prima facie* evidence. The safe way, then, in all matters not palpable or axiomatic, is, that while mere *experience* may be adduced as an auxiliary for the purpose named, to put forward or postulate nothing that will not bear the scrutiny of science and reason. To illustrate this point: The man who has used tobacco for 50 years and is now 70 or 80 adduces his age and experience to prove that tobacco is wholesome. The man who has used whisky-and-water half a century as a beverage and is now an octogenarian cites his age and experience to prove that whisky is wholesome; while another octogenarian who has used pure water his whole life without the whisky cites his age and experience to prove that water alone is the most wholesome beverage. But does the fact that the one has used tobacco 50 years and is still alive, and the other whisky 50 years and is still alive, prove that tobacco is wholesome or that whisky is wholesome? If it proves anything in the eye of the physiologist, it proves that humanity is tough, and that some constitutions can stand a great deal of abuse. On the other hand does the fact that the other octogenarian who used *only* water prove that water is wholesome. No, it does not, for we must be fair on both sides. It will thus be seen that *experience* alone without a rational or scientific interpretation is by no means a sure guide. When the tippler lives to be 80 and avers that whisky is wholesome, and the teetotlar lives to be 80 and avers that only water is wholesome, science must step in and decide the matter between them, by inquiring what is whisky and what are its relations to the living body of man; and what is water and what are its relations to the living system?

When, therefore, I affirm the following propositions (which I do most emphatically) I affirm what is supported not merely by experience and *prima facie* evidence, but what will stand the scrutiny of the highest intelligence and most advanced science of to-day. The propositions are these:

First, All sickness, disease and premature death, as well as all conditions of health, are purely natural sequences mostly within man's cognition and control, instead of being either arbitrary "dispensations" or in any manner fortuitous.

Second, As a natural corollary of this, human beings have, barring unavoidable accidents and hereditary diseases,—their life and health in their own hands.

Third, Following also from the above, nearly all the sickness, misery and premature death with which the world is filled is caused by ignorance and could be avoided by knowledge.

Fourth, As the preservation of health and life is or ought to be the highest concern of life, our highest and greatest duty is to study and make ourselves acquainted with the natural conditions upon which health and life depend, so that we may preserve our own health and instruct our children in this knowledge and save them from premature death.

The masses, however, do not do this. The most deplorable ignorance on these subjects prevails, not only among the lower classes, but among the upper and so-called educated classes. I say "so called" because no man or woman is educated who does not know how to take care of his or her body or save their little ones from premature death from diseases which could either have been avoided altogether or cured under proper hygienic treatment. Through unphysiological living,—the breathing of foul air and poisonous miasms, bad eating and drinking, uncleanliness, etc.,—sickness invades the household. Wholly ignorant of the causes, the victims are equally ignorant of the remedies. The doctor is sent for. He gives his poisons. Some, with good vitality, recover in spite of them; others die.

With reference to the disease called diphtheria, as already asserted, 19 out of every 20 of those who die might be saved were the parents properly enlightened on those subjects; and the simple, natural treatment applied. I have never seen a single case prove fatal under hygienic treatment; but have seen at least five-sixths die under the regular drug treatment.

In order to make this letter practically useful, and in the hope of saving some of the little ones from premature and unnecessary death, I will give here some instructions as to the treatment of diphtheria, which I have done before and which has not been without good results.

Of course it is impossible to give a detailed treatment to apply in all cases, as the *diathesis* varies so much; but a general plan may be indicated. Cold applications to the throat, abstinence for a time from food, *enemas* to free the bowels, cooling drinks of pure soft water, tepid bathing, and thorough ventilation and cleanliness is the simple hygienic treatment of this disease and will save every child and adult to whom it is applied in time, except, perhaps, those with very frail or scrofulous constitutions, whom no treatment could save. A small piece of ice taken into the patient's mouth and swallowed, or allowed to melt in the mouth, and then replaced by another, and so on, has been effectual, with good nursing, in many cases, without any other special treatment. The *rationale* of this treatment is simply this: The cold applications to the mouth and throat, by reducing the violent heat and inflammation, arrest the *fibrinous exudation*, thus preventing the formation of the false membrane, which so often chokes the patient to death. It is very important that the feet be kept warm, and the excess of blood diverted from the head to the extremities. Indeed, a primary indication in all diseases is to restore the *balance* of the circulation; and this can be done in a simple, common-sense way by the application of water, heat, etc., to the different parts instead of restoring to the barbarous, Allopathic practice of bleeding.

Let all parents, as a conscientious duty, study the laws and conditions of health, so that they may not only preserve their own health but that of their children and save them from premature and unnecessary death. This is by far the most important of all knowledge inasmuch as not only our own highest welfare is involved, but the future prospects of the human race.

Selby, Ontario.

For the American Bee Journal.

The Coming Bee—Pure Mating—etc.

SAMUEL SIMMINS.

The past season has been better than that of 1882, but under the average. We have had, for two summers, cold winds and hazy skies, which made it very unsuitable for the distillation of honey. Probably this has been the result of the very mild winters we have recently experienced—even up to now we have had little frost, and there is at present no sign of any. The bees exhaust themselves flying many days during the winter, and when spring arrives it is a difficult matter to get them strong by the time our first honey crop should be gathered, which occurs the second week in May, sometimes earlier. Thus we get too much of a good thing, in the way of "winter flights."

How far will queens fly to meet a drone?

I have always had a great interest in this matter, but I consider that G. M. Doolittle has rather stretched the point. I have no doubt that his black queens did mate with drones having yellow blood. But this admixture may have traveled by successive stages from one apiary to another, until it was in the apiary nearest him. Because his black queens began to produce workers with yellow bands, that does not *prove* that they were mated *directly* to those drones of the pure Ligurians, five miles off; though I admit that once in a while such a case will occur.

I can also give a few facts on the subject. For three years I have kept a number of pure Ligurians at this place. Each autumn I "drive" the bees for the cottagers all round. The country is devoid of trees, and the results are as follows: A village *one* mile from my Ligurians has *never* yet shown a sign of yellow blood. At 2 other homesteads 1¼ miles, no case of crossing was found until this year, and then with only 2 colonies. Another place, *less* than a mile from here, has not the least sign of yellow bands. And at places beyond, that are from 2 to 2½ miles, I have yet to see the first cross.

With an apiary of Ligurians, *two* miles from all other bees, I should, (considering these facts) expect to mate 99 per cent. pure. And if only 1 mile, clear, good results would be obtained. Probably Mr. Alley has very few (if any) pure black bees around him, or he would not have considered only one-half mile sufficient.

As I have blacks in my apiary, and close around, no statement can be made regarding the "natural" mating of Italians. The results from the black queens should be conclusive, as I have always found the latter stronger on the wing. They will fly and get mated, while Ligurian queens fail time after time. This is an important matter. Wherever I am rearing queens from black mothers, I am generally certain they will be mated in good time. *Pure* Italians, as honey-gatherers, are certainly superior to *pure* blacks, and it would be well if those comparing the two, would consider well that the bees they have are really pure, which often is not the case. I find however that nothing equals the manner in which blacks *cap* their honey, and I am certain that the bee of the future will have to be bred in a *direct line* from the black side. I find hybrids from queens of the black race, not only gather honey (in this country) when the *pure* Ligurians are storing nothing, but it is a positive fact that a certain number of such hybrids will do more work than *three times* their number of any other race or hybrids, and this is what is wanted—*the largest amount of work from the least number of workers*; the laborers also producing their work in the best shape.

In conclusion, I will repeat that any attempt made to produce the "coming bee," while ignoring the most desirable qualities of the black race, will prove a complete failure.

Rottingdean, Eng., Dec. 21, 1883.

For the American Bee Journal.

Union Convention of Western Iowa.

A meeting was held in the normal school building, Dexter, Iowa, for the organization of a bee-keepers' society, on Dec. 29, 1883. Mr. J. E. Pryor, of Arbor-hill was called to the chair. A constitution was presented and adopted after some discussion. The following officers were then elected: Pres., W. B. Kenyon; Vice Pres., J. H. Brainard; Sec'y, M. E. Darby; Treas., Silas Lightner. Article 4 of the constitution was amended and the fee reduced from 50 cts. to 25 cts.

The roll was then called and members responded, stating the number of colonies kept and the hive used. 255 colonies were represented; 128 in Simplicity hives; 121 in Langstroth, and 6 in Vance hives. Every member reported some Langstroth hives in use, only 6 deep frame hives. (Our members lost but few bees during the severe winter of 1880-1.—Secretary).

The relative merits of comb and extracted honey were then discussed. The president favored comb honey, as requiring the least work per colony. Mr. Humphrey thought the production of extracted honey more profitable. Mr. Rose works for comb honey in sections. Dr. Vance for comb in full sized frames. The president and Mr. Andrews thought that success in the apiary required the use of an extractor.

Question. "How can we get rid of laying workers?"

Mr. Humphrey sprays with sweetened scented water, and drops a laying queen in on the brood frames. Says a laying worker may be detected by her retinue, the same as a queen. The secretary dissented from this view. The advisability of using porticos was discussed. Portico had no friends.

How shall we prevent bees laying out? All said extract closely.

A few other topics were discussed. Adjourned to meet in Dexter, on the last Saturday in March, 1884.

W. B. KENYON, Pres.

M. E. DARBY, Sec'y.

For the American Bee Journal.

Getting Straight Combs.

J. V. CALDWELL.

In a late article Mr. Doolittle claims that good worker combs can be had as cheaply without the use of comb *foundation* as with it; in fact cheaper, as Mr. D. does not use the article in question. To say that I was surprised does not express my feelings; I was simply astonished. The use of *foundation* in getting combs nice and smooth, and all worker, I had supposed to be an established fact among bee-men. But here Mr. Doolittle tells us virtually that the discovery of comb foundation is not only useless, but a real damage to bee-keepers, as they are spending their hard-earned dollars for a worse than useless purpose. Mr. D. wishes us to try the experiment with two good natural swarms, one having full sheets of comb foundation; the other only a wax guide on the frame to start them. In reply I would say that I could never get swarms, before using foundation, to fill 8 frames, 8x19 in. solid, with comb and honey in less than from 10 days to 2 weeks. But to favor Mr. D. as much as I can, I will say 10 days. Now I have had swarms in the last two or three seasons fill the same number of frames in just 3 days, and they were ready to work in the boxes. Mr. D. knows about what the foundation would be worth, but we will say at the highest figure about 75c. Now the time of a good swarm for 7 days in the honey season is worth, according to Mr. Doolittle's own figures, about $8. Give the comb foundation credit with $7.75 on this deal.

Cambridge, Ill.

Are 6 Frames Enough in Summer?

In the BEE JOURNAL, page 626, Mr. Doolittle says that during the past season he worked some of his hives with only 6 Gallup frames. Will Mr. D. please tell us whether he used more than 6 frames before the honey harvest; or in other words, can he get a colony strong enough with 6 frames?

D. G. PARKER.

St. Joseph, Mo., Dec. 22, 1883.

SELECTIONS FROM OUR LETTER BOX

Cold in New York.

Yesterday morning at 7 o'clock the mercury stood at 20° below zero. This morning at 30° above at 7 o'clock, making a change of 50° in 24 hours. We had the most severe gale from the south from 9 to 12 last night that we ever experienced. Haystacks were untopped, windows blown in, etc. The snow was driven into every crevice possible. Some of the covers to my bee hives were blown off and the hives filled with snow and hail which accompanied the wind. Upon getting out the snow the bees were found lively and in good condition. G. M. DOOLITTLE.

Borodino, N. Y., Dec. 24, 1883.

My Season's Work.

I started the last spring with 4 colonies (1 very weak); increased to 7 by natural swarming; and 3 went to the woods. They gave 250 lbs. of honey, mostly in 1-pound sections. I bought 6 colonies, making 13 in all now, in good condition. E. C. FARQUHAR.

Carlos City, Ind., Dec. 25, 1883.

Wintering on the Summer Stands.

The spring of 1883 found me with 13 colonies of bees; some of them were very weak. They increased to 85 this season. I obtained 1,400 lbs. of honey, mostly extracted. I sold all my honey at home, at 15 cents per pound for extracted, and 20c for comb. My best colony gave 250 lbs. of extracted honey and increased to 5; it had a queen that I received from Mr. Alley, the season before. My bees are mostly Italians. I always winter my bees on the summer stands, with plenty of good sealed honey. I have always been more successful that way, than in the cellar. JOHN BAXTER.

Pickering, Ont.

Clipping Queen's Wings, etc.

My bees went into quarters for winter in good condition, to all appearance; 287 in all; 20 in 5 frame hives; the balance in 9 and 10 frame hives. They are packed in 4 cellars, made for their use, and, up to date, are wintering finely. I see some object to the practice of clipping queen's wings. I have practiced the above-named plan for the last 3 years; the result is that I have not lost one swarm during that time, by their flying away to "parts unknown," and only lost two queens by clipping their wings. Last spring, having a very choice queen and wishing to encourage her, that I might get early drones, I placed a card of nice new drone comb in the center of the brood nest, and fed often; in fact did everything I could to stimulate them. About the 15th or 20th of June, out came the old lady with a large swarm but no drones. On examining the combs I could not find any drone larva, or eggs either, in the drone comb, but there was plenty of worker brood. She was three years old; and was good the balance of the season, when I killed her, as I do all old queens at the close of their third season's work. I think it would be still better to kill all queens after their second year's laying, as it is very easy to get plenty of fine, well-developed young queens in swarming time, which are worth more than old queens. WM. LOSSING.

Hokah, Minn., Dec. 29, 1883.

Bees Quiet and in Good Condition.

My bees are all quiet along the line, with the thermometer down to 22° below zero this morning. They are packed in hay and chaff in Langstroth hives on the summer stands. They came out nicely last winter in that way, and if they could stand that, I think they will stand any other winter that will be likely to occur. D. K. BOUTELLE.

Lake City, Minn., Dec. 19, 1883.

The Old and New Way.

I am now in my 74th year, but I like to work among the bees. I started in the spring with 9 colonies and have now 30 in good condition. I took 280 pounds of comb honey in sections, and 700 pounds of extracted. My neighbors work principally on the old plan, but one of them had, this fall, 69 colonies; another 32, and another 34 colonies; 135 colonies in all. I have taken more honey than all three of them. WM. C. WOLCOTT.

Eldorado Mills, Wis., Dec. 26, 1883.

Bee-Keeping in Wyoming Territory.

I am the first and only man who ever tried the honey bee in Wyoming. I have had them two seasons on my ranche, and had surplus honey each year. I have demonstrated the fact that they can be wintered here as easily as in any of the northern states, and that they can store up beautiful white honey from nothing but the wild flowers of these mountains and prairies. G. G. MEAD.

Rawlings, Wyo., Dec. 25, 1883.

Rigging up Saws for Making Hives.

I wish to rig a saw or saws to run by horse power, to cut my hive lumber, and also to cut section boxes and frames. I have a threshing machine horse power and I want to use it to run my saws, and would like to have some information in regard to attaching them to it. The necessary speed of saws and how to arrange wheels and pulleys and size of same to secure the necessary speed.

As I have never seen anything in the BEE JOURNAL in regard to setting up and running circular saws for hive making, I thought, inasmuch as the time was close at hand when many would want to be doing such work, it would not be amiss to have some general information on the subject. Who now will make the contribution?

How about that egg worker of Prof. Phin's? It expresses to my mind an idea that to me seems incredible, to wit: The egg does not produce the worker but that the worker is actually, and the drone also, made of the egg or out of the material which composes the egg, upon the same principle that we would make an ax handle of oak or hickory! He also says: "By the way, who ever heard of rooster eggs?" I wonder if the Prof. ever saw an egg rooster? I have seen tin roosters, and they were tin themselves, not produced by tin. Just so would it be with the egg drone and egg bee. F. M. REEDS.

Hindsboro, Ill., Dec. 19, 1883.

Lost None in Winter.

I commenced the last season with 24 colonies of bees; increased to 91, and took 1,400 pounds of comb honey. I winter them in the cellar, where I have always wintered my bees heretofore, and never lost a colony. My bees are a very satisfactory investment. PETER P. HARTL.

Beaver Dam, Wis., Dec. 22, 1883.

Bees Moved in Winter.

In December 1882 I bought 2 colonies of Italian bees, at a public sale, for $2 each, and moved them about 16 miles; with one colony I had before, these made three to winter. I wintered them out doors with chaff cushions in the upper story, and corn fodder around the outside. One that I bought at the sale starved; the others came through alive but I had to feed them. The spring was cold, and I was compelled to keep on feeding until about the middle of May. They increased by natural swarming to 8 colonies, having plenty of stores for the winter. Of honey I only got about 15 lbs., in one-pound sections. Basswood was our best honey source, and at that time my bees had the swarming fever, so for that reason I did not get much honey, but I am well satisfied with the increase. This winter I have my bees in a shed packed in straw. J. J. THIEROFF.

Defiance, O., Dec. 26, 1883.

Bees Packed on the Summer Stands.

I had in the fall of 1882, 17 colonies; I lost 4 in winter. In the spring of 1883 I bought 2 colonies, making 15 to start with. They increased by natural swarming to 50 colonies, and I took about 900 lbs. of comb honey in one-pound sections, all white. I had no fall honey. I doubled up a few and have now packed on the summer stands 47 colonies in fair condition. W. H. MILLER.

Berrien Springs, Mich., Dec. 31, 1883.

Two per cent. of Loss in Winter.

In the fall of 1882, I had 47 colonies; 46 survived the winter, but one was queenless; increased to 96, and gave 1,900 lbs. of comb honey, or about 41 lbs. to the colony, spring count. We had no fall honey. Bees are wintering finely now. D. RAWHOUSER.

Columbus City, Iowa, Jan. 4, 1884.

Cow Pea for Bee Pasturage.

Will some southern bee-keepers please give their experience with the *cow pea* as pasture for bees? Such information as I have been able to obtain concerning its value, is conflicting. It is said that, during the season, two crops of peas can be raised in this latitude. If so, and if the bloom furnishes any considerable quantity of honey, it seems to me that the cow pea might me made very useful to the bee-keeper here in tiding over the July dearth of flowers, to which we are subject.

W. C. Preston.

Rome, Georgia, Dec. 26, 1883.

Packed in Forest Leaves.

I have 44 colonies in winter quarters; 12 in the cellar and the others on the summer stands, packed in forest leaves; all doing well.

Jacob Bishop.

Greenwood, Ind., Dec. 27, 1883.

Three Years of Bee-Keeping.

I began bee-keeping in 1881 with 2 colonies, one German and one pure Italian; they increased to 4; from 4 to 11 in 1882; from 11, with one Alley queen, to 40 in 1883. They are packed on the summer stands, with one foot of fine hay and a shock of corn fodder over this. They were all alive on Dec. 24. Some of my Syrian and Italian crosses were flying on the 23d. We had 2 nights of cold; 28 and 24° below zero. My pure Italians were from Herman Bros.; their's from Doolittle.

A. M. Firman.

Quasqueton, Iowa, Dec. 27, 1883.

Ancient Bee Lore.

Can any of the botanical readers inform me whether or not the term *wolf's bladder* is another name for the puff-ball? Old Gervase Markham in his "Countrie Farm," now before me, gives directions for taking honey from the hives or as he calls it "gelding the combs." He advises us to use the "smoake of Neat's dung; or of a wolfe's bladder, or galbanum, or wild mallones. and with the juice of this herb must he be annointed which shall gather the honey, to keep him that he be not stung." And then he goes on to describe a very good bee dress. Markham's work was published in 1610, just 134 years before the "Female Monarchy" of Rev. John Thorley; 116 years before Warder's book "The True Amazons," and 24 years before the famous work of Butler, in his "Hive and Honey-Bee." Mr. Langstroth, probably following Bagster, tells us at page 210 that Thorley first suggested the use of the puff-ball, but if, as I suspect, wolf's bladder was at that time the common name of the puff-ball, then the first notice of it belongs to Markham, unless he took it from some still earlier writer. Many of my old books on bees escaped the destruction of my library by fire in 1881, and it is very curious to see how the old bee-masters worked. Markham tells us not to kill the drones because they "hatch the small bees," an idea which has been held by modern writers ever since the most important function of the drone has been fully discovered. He also directs us to hang hives in the woods. and tells us how to "order" them—a device which under the name of decoy hives has been attributed to modern bee-keepers. My suspicion that wolf's bladder is another name for the puff-ball is supported by the etymology of the scientific name of the plant *lycoperdon*. The first part is Greek for *wolf;* the second is not translatable to ears polite. John Phin.

Cedar Brae, Paterson, N. J., Dec. 25, 1883.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Obstructed Entrances.

Some bee-keepers say their colonies covered with a snow drift, come through the winter better than those not so covered. What is your opinion? Should the snow be swept off the alighting board and dug from the entrance as often as it gathers? This is what I do, but it seems to disturb the bees, as they know instantly when the hive is touched. F. H. Dow.

Corning, N. Y.

We know of numerous instances where bees have wintered splendidly when entirely buried in snow, most of the winter; again, of cases where they have nearly, or quite, all died with dysentery, while so buried. My opinion is, that the main cause of our winter losses, is not to be found in snow drifts, nor the want of them. I do think, however, that the disturbance caused by even the most careful methods of clearing away the snow, often result in damage, by aggravating the difficulty. A portion of my hives set very near the ground. I have leaned a board up over the entrances, which leaves a vacuum when the snow covers them over.

Heddon's Section Case.

Wishing to have some comb honey this season, I had two cases and honey boards made according to the plan given in the Bee Journal, and placed them on two of my strongest colonies, at the time Mr. H. recommended. When they began to build comb between the frames and honey board, I filled the sections with foundation and they never entered them for work. I kept them on the hives, one for 2 weeks and the other for 4 weeks, while other colonies used for extracting were giving me 12 to 15 ℔s. of extracted honey per week. In the colonies having the cases I found every crack and crevice filled with bits of comb, and the brood chamber filled with honey, and only two frames with brood. One of my friends who had one of Mr. Heddon's queens for business did not succeed much better than I did. while with extracted honey he was quite successful. What is the matter? Is it the bees or the cases?

DeWitt, Neb. W. F. Ware.

I was not aware that specifications for the construction of my case, and honey-board, sufficient to work by, had ever been given in the Journal. I am anxious to have these improvements enjoyed by bee-keepers, and for that reason I have declined publishing manufacturing descriptions, feeling confident that a large majority who might thus be led to make them without a sample to work from, would make a failure, and thus condemn mine, because they failed with their own.

In reply to the question "What is the matter," I must say I cannot tell. If Mr. Ware, having made cases and honey-boards like my own, in principle, and his friend having my strain of bees, have both failed in the production of comb-honey, surrounded by the same conditions with which I best succeed, I am *forced* to the conclusion that the difference is in the management.

Glassing Honey in Sections.

I am in a quandary and look to the "What and How" department for light. My honey the past season (6,000 ℔s.) was in 2 ℔. sections, unglassed. I had some difficulty in finding a home market, because of that shipped in from other points—honey in glass at less cost than my price for the same quality. I do not wish to order sections until I know what the prevailing demand is. Please answer the following questions:

1. Is it the prevailing practice, and does the market demand that honey in 2 ℔. packages be glassed?
2. In honey quotations, is reference made to honey glassed or unglassed?
3. To secure honey for glassing, what width of section is best?
4. Do parties who succeed without the use of separators, secure honey in condition to be glassed?
5. In marketing, what difference in price, if any, is made between honey glassed and unglassed?

E. W. Thompson.

Hinesdale, N. Y.

1. Eastern bee-keepers and eastern salesmen, tell us, that there is quite a demand for glassed sections, especially for the larger sizes, like yours.

2. Where the matter is not specified, I take it that the quotations mean either way. Some Chicago dealers tell us that their retailing customers ask them for glassed sections, during warm weather, in time of flies.

3. I would not alter my preferred width of sections, if I choose to glass them. If the glass goes *within* the wide pieces (resting on the narrow), separators should be used while storing, and I would use 1¾ in. scant, sections. If I glassed on the outside of the wide pieces of the sections (using paste-board cap, top and bottom, *a la* Moore) no separators would be needed, and I now think I would use 1½ in. sections, though those would be rather thin, for so much glass. I much prefer 1 ℔. sections without separators, and without glass.

4. Answered above.

5. In some markets none. In others, more is paid for those unglassed.

Regarding the *future* practice of producers, ask yourself which you would buy. You are wiser than the consumer. Something of what you know, he has yet to learn.

> "For truth shall conquer at the last.
> As round and round we run ;
> And the right shall ever come uppermost,
> And justice shall be done."

Preparing Bees for Shipment.

Will Mr. J. Heddon in the "What and How" column, please give explicit directions for preparing bees for shipment, when sold by the pound, in lots varying from 5 to 100 pounds? How to make the shipping cages, how much room to give them, kind of feed, etc. C. WEEKS.

Clifton, Tenn.

For a cage for shipping bees by the pound, I use my shipping crate. The same which was described three or four weeks ago, in this paper, by W. Z. Hutchinson. The crate is 12½ in. long, 8½ wide, and 4⅜ high, with 2x9 glass at the ends. Instead of the glass, we put in wire cloth. For a cover we use the same, and for the whole, we use one continuous strip. We use a proper sized wood pocket, on each inner side of the crate, in the one we put wet rags, containing all the water they will hold and not drip. In the other, what is known, as the Viallon or Good candy. We open one end of the case, insert a large tin funnel "*a la* Root," and shake the bees from the combs into this funnel, when they slip into the cage to stay. Now tack fast the end, and set the crate down flat. I forgot to mention a wood bail which we make of thin flat barrel hoops, which is tacked permanently to the sides of the crate, which serves as a handle, and prevents the top being covered. A more lengthy account of all the detail, would take too much room here. I have tried to give an outline of the principle I use and consider cheapest and best. This crate has a capacity well equal to 2 ℔s. of bees. We use it for 1 ℔. also. For 100 ℔s. we should prefer the use of 50 of them, to any thing larger.

Metal Rabbets for Frames to Rest On.

Will Mr. Heddon kindly give, through "What and How" his objection to metal rabbets for frames to rest on, provided the frames are *metal cornered*?

1. When all-wood frames are used, I can readily understand from my own short experience, why metal rabbets are worse than useless, as the bees will glue the top bars to them, rendering it necessary to pry them loose *sideways*, and unless very carefully done, irritating the bees; but would not all trouble be avoided by the use of metal corners, (tops at least) and would not the advantage of being so readily moved, more than counter-balance the additional cost?

2. Would there be any advantage or disadvantage in adding salicylic acid to the syrup, when feeding, as a *preventive* of foul brood?

3. At the proper time, will he please give the details of his method of wintering bees without pollen? J. W. RASIN.

Jenkingtown, Pa.

1. For three years I used 25 hives with metal rabbets, and metal cornered frames. In 1871 I first used metal rabbets with all wood top-bars, and have used them ever since in extracting supers. At the date mentioned, I used them in brood chambers. In eitder place, I prefer all wood top-bars with metal rabbets, to the use of metal corners with metal rabbets. My objections to metal corners are, they are disagreeable to handle. When a heavy comb is gripped sufficiently firm to shake off the bees, they bend in the fingers, and sometimes their cutting tendency hurts the fingers. If you read my late article on readily movable hives, you will see how one working under our system, would be annoyed by metal cornered frames sliding about. In our brood chambers we want neither metal corners nor metal rabbets. In extracting supers we want metal rabbets, but no metal corners any where. A wood top-bar resting upon a tin rabbet does away with more than ¾ of the ordinary gluing-fast of the frames. The bees cannot glue the top bars to them but very little, and this little we desire; and in the brood-chamber we desire still more gluing, in fact all that we find between our wood top-bars and wood rabbets.

With the almost immovable chaff hive, metal rabbets are more consistent; we fold no tin in constructing metal rabbets. We rabbet down ⅜ below the desired point, and then tack a ¾ strip of tin flatly to the inside of the end piece of the hive, ⅜ being above, and ⅜ below the rabbet shoulder.

2. I wouldn't advise drugging the food given to bees with as powerful an antiseptic as salicylic acid merely as a preventive of foul brood, unless it had been in my apiary. The best and surest preventive is in using great caution in the purchase of bees, queens, etc.

3. The proper time to give details of the method of wintering bees without pollen will be when we know to a certainty that it is the cause of dysentery. At present we only believe it so, and hope to know soon.

☞ The 5th annual Convention of the Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will be held at Jefferson, Ohio, Jan. 16 and 17, 1884. All are cordially invited.

C. H. COON, *Sec.*

New Lyme, O., Nov. 26, 1883.

☞ The Ohio bee-keepers will hold their annual convention in the parlors of the Farmers' Hotel, at Columbus, O., Jan. 14, 15 and 16, 1884. All interested in bee-culture are invited. The following subjects will be discussed; "How to winter bees successfully." "Are the new races of bees a success?" "What can we do to prevent adulteration of honey?" "How to create a home market for honey." "How many colonies can be kept in one locality?" "Can we do without separators?" "Which are best, deep or shallow frames?" "What shall we do with second swarms?" "How many brood frames are necessary in a hive?" "Which is the most salable section, one-half, one or two pounds?" "Is it advisable for all bee-keepers to adopt a standard size of frame?" "What is the most desirable width of sections?"

The above questions will be discussed by eminent men, such as Rev. L. L. Langstroth, Dr. Besse, S. D. Riegel, C. F. Muth, A. I. Root, of Medina, and others, and in addition to the above, Prof. Lizenby, of the Ohio University, will deliver a lecture on "Honey-producing plants:" also Mrs. Jennie Culp will read an essay.

C. M. KINGSBURY, *Sec.*

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Our New List of Premiums.

Getting up Clubs for 1884.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ Do not let your numbers of the BEE JOURNAL for 1883 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or in cloth for $3.00.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ We have received the Price List for 1884 of Mr. G. B. Lewis, of Watertown, Wis.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ Our friends will find this the season for securing subscriptions. We offer the premiums and they can easily secure them.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ A correspondent asks if any one may select a Binder for the Bee Journal, among the books given as Premiums for getting subscribers we reply, yes; any book or binder we keep for sale, may be selected by those who get up clubs.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

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☞ Letters for publication must be written on a separate piece of paper from items of business.

☞ As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the Bee Journal, on the first page of this paper.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ The 25th annual fair of the Linn County Agricultural and Mechanical Society will be held on the fair grounds at Cedar Rapids, Ia., Sept. 9th, 10th, 11th and 12th, 1884.

C. G. Greene, Sec'y.

Advertisers' Opinion.

The queen business is *rushing*, and we think the Bee Journal deserves much credit as an advertising medium.

E. A. Thomas & Co.
Coleraine, Mass., July 18, 1883.

Advertisements.

The American Bee Journal is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men and is, therefore, the best advertising medium.

A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, **DR. G. L. TINKER,**
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65 *ENGRAVINGS*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

For Bees, Queens,
Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1ABly Lock box 995. Belleville, St. Clair o., Ills.

DR. FOOTE'S

HAND BOOK OF HEALTH,

Hints and Ready Recipes.

Is the title of a very valuable book that gives a great amount of information of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
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How to Breathe,
Overheating Houses,
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Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sunstroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only 25 Cents. Sent by Mail, post-paid, by

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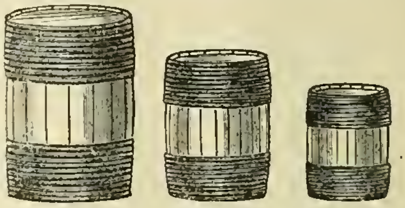
KEGS AND PAILS

FOR EXTRACTED HONEY.

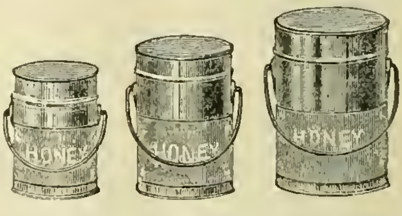
These KEGS are designed to answer the popular demand for honey in small packages, and when compared with large barrels holding from 300 to 500 lbs. each, they are fully as cheap and often cheaper. They need no waxing, but should simply be thoroughly scalded with boiling water before used. The leakage so often occurring in the large hard-wood barrels can be entirely prevented by using this size of packages. Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these Kegs can be handled and shipped, with an actual saving in original cost, it is apparent to all that they are the best. Prices:

5 gallon Kegs, holding a trifle over	50 lbs.	40c
10 " " " " "	100 lbs.	60c
18 " " " " "	190 lbs.	80c

When 25 or more kegs are ordered at one time, a discount of 10 per cent. given on the above prices.



These new kegs are designed and manufactured with special reference to my experience and suggestions from those who have used the fish, lard and syrup kegs of last season. The staves are Norway Pine; the heads are Oak; and the hoops are Hickory, and, as will be noticed by the accompanying illustrations, they are well bound. If the heads are painted, I will guarantee these kegs not to leak. It is not essential to paint them, but I believe it will pay to do so.



These PAILS have a full cover and are excellent for selling honey in a home market, and after the honey is candied, they can be shipped anywhere. All sizes, except the smallest, have a bail or handle, and when emptied by the consumer will be found useful in every household.

Assorted samples of the four sizes put inside of one another as a nest, price, 50 cts. by express. The following are the prices in quantities:

			Per doz.	Per 100.
Gallon, holding	10	lbs. of honey	$1.80	$12.00
Half Gal	" 5	" "	1.50	9.00
Quart,	" 2½	" "	1.20	7.00
Pint,	" 1¼	" "	.75	4.00

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

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MUNN & CO., of the Scientific American, continue to act as Solicitors for Patents, Caveats, Trade Marks, Copyrights, for the United States, Canada, England, France, Germany, etc. Hand Book about Patents sent free. Thirty-seven years' experience.

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ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street Chicago, Ill.

BEES Send to Chicago, Ill., for sample of **AMERICAN BEE JOURNAL** Monthly, $1 a year. Weekly, $2.

Bingham Smoker.

Please bear in mind that our patents cover all the bellows bee smokers that will burn sound wood.

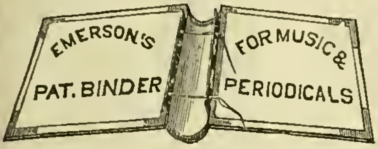
Bingham & Hetherington,
ABRONIA, MICH.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

BIND YOUR JOURNALS
AND KEEP THEM
NEAT AND CLEAN.



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Any one can use them. Directions in each Binder

For Monthly Bee Journal..............50c.
For Weekly Bee Journal...............75c.

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925 West Madison Street, Chicago, Ill.

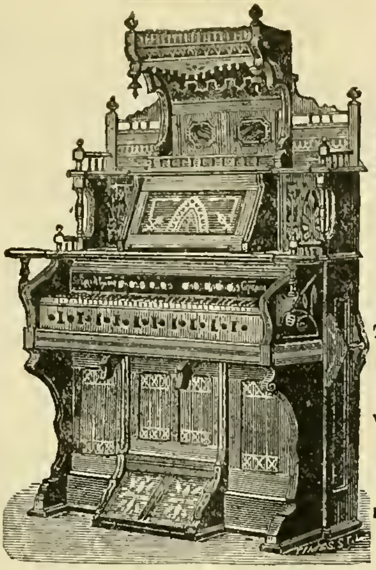
REST not, life is sweeping by, go and dare before you die, something mighty and sublime, leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co Portland, Maine. 8A1y

HRONIC DISEASES CURED.

P.H.T.
BOOK AGENT

New paths marked out by that most popular book on MEDICAL, SOCIAL and SEXUAL SCIENCE, PLAIN HOME TALK and MEDICAL COMMON SENSE. Nearly **1000** pages and **200** illustrations, treating of the human body in health and disease, by **DR. E. B. FOOTE, of New York City;** Price, **$1.50.** Over **500,000** of his books have been sold in the United States, England, Germany and Australia. An Edinborough physician, retired after fifty years practice, writes: "*Your work is priceless in value, and calculated to regenerate society.*" A 16-page contents table of Plain Home Talk, a copy of Dr. Foote's Health Monthly, and a 100-page pamphlet of "Evidences" of the curability of all Chronic Diseases of whatever part, sent for 3 cents. **DR. FOOTE'S Hand-Book of Health Hints and Ready Receipts** gives **128** pages of advice about daily habits in all seasons, and recipes for cure of common ailments—a valuable reference book for every family. By mail, 25 cents. LIBERAL DISCOUNT TO AGENTS.

Murray Hill Publishing Co.,
29 East 28th Street. New York City.



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The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.
Write for our prices before buying elsewhere.

STORY & CAMP,
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BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
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The Bee Keepers' Handy Book

216 pages, bound in cloth by mail, post-paid, for **$1.00** per copy. Send for prospectus and our special Circulars describing three new and useful articles for the apiary.

47Atf **HENRY ALLEY**, WENHAM, MASS.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.
Apply to C. F. MUTH,
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do not improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed, sent free. Address STINSON & CO., Portland, Maine. 8A1y

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

FDN MILLS, 10 INCH $15.00
W. C. PELHAM
MAYSVILLE, KY.
37A1y

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

Sweet Clover

Prices :—25 cents per lb., $3.25 per peck, (15 lbs.,) and $12.00 per bushel, (60 lbs.) When ordered by mail, add 18 cents per lb. for postage.

Having purchased a large quantity of Sweet Clover Seed, I will make a

Special Discount of 20 per cent.

from the above prices, on all orders received during the month of

JANUARY.

Now is an excellent time to make your purchases to advantage.

Sow it in the **FALL, WINTER** or **SPRING**—a great many sow it broadcast on the snow—alone, or with field grain or grass; six pounds to the acre. It will do well in field or lane, on hillside or in valley, on uplands or soil subject to overflow. It is perfectly hardy, standing drouth admirably, and flourishing well during rainy seasons. The honey is the best. As it does not bloom till the second season, it will do no harm if grazed by cattle the first season. It is excellent for waste places and commons.

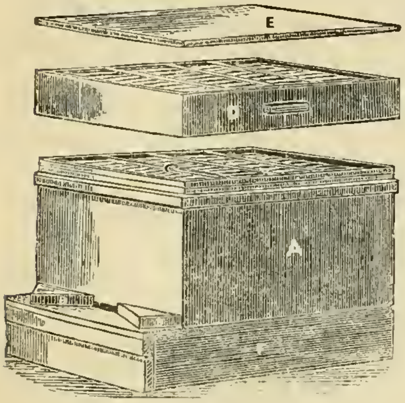
ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

Bee-Keepers' Magazine.

New Type, New Paper, New Cover!!
Subscription now only $1.00; 3 mos. 30c.
SAMPLE COPY FREE!!!
KING & ASPINWALL,
1Atf **14 Park Place, New York.**

1868. 1884.

HEDDON'S COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

Up to this date, Jan. 1, I have not been able to make any contract for any first-class Sections, and I neither use or sell any others. If I offer you any for 1884, you will see notice here. I have about 10,000 5x6x2 to spare now.

BEES.

We now have in winter quarters, in first-class condition, 350 colonies of bees, of our new strain, and of pure Italian blood. As most of you are aware, for six years past I have taken pains to breed my stock for markings of character, or qualities, rather than color, using as a base, the leather colored Italian and brown German bees.

On reading my Circular, you will find some testimonials from practical bee-keepers (a few saved from many received), that will give you an idea of how well I have succeeded. Our hives and combs are in good condition, and our bees have always been free from foul brood. I shall endeavor to send out a first-class line of Full Colonies, Queens, Nuclei and Bees by the pound. Parties wishing to start an apiary, or purchase on a large scale, as well as those who wish the choicest of my stock to breed from, may do well to correspond with me.

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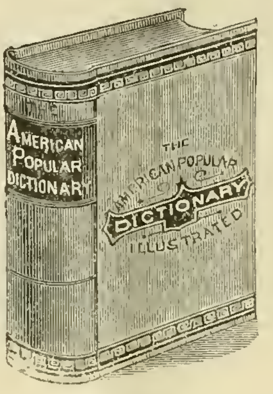
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ESTABLISHED IN 1861.

Chicago, Ill., January 16, 1884.

VOL. XX. No. 3.

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OF
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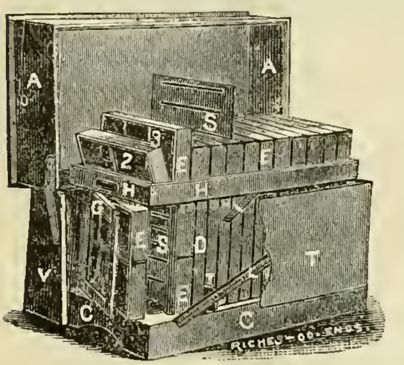

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Weekly Bee Journal,

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VOL. XX. CHICAGO, ILL., JANUARY 16, 1884. No. 3.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

☞ Mr. A. H. Holcomb, of Winnebago, has sold his apiary, as advertised in BEE JOURNAL, to Mr. C. M. Hollingsworth, of Iowa City, Iowa.

☞ We have received Vennor's Almanac for 1884, published by the American News Company of New York. Vennor is sadly "out" on his guesses about the weather for January, so far. He talks of "brightness and balminess," when the mercury is dancing around the thirties below zero.

☞ Just as last week's BEE JOURNAL was ready for the press we received by mail a fine Christmas bouquet from Mr. J. D. Enas, of Napa, California, which he cut on Christmas day out of doors. It was a pleasant contemplation when we were enjoying (?) the winter weather at 28° below zero, that in California—the flowers were blooming out of doors, spreading their fragrance all around. Mr. Enas has our thanks for the fine bouquet.

☞ It is now quite time to be making arrangements for all the hives, sections, foundation, and other articles needed in the apiary which require time to make and get in readiness for the coming honey harvest. If you fail to send your orders to some responsible dealer in proper time, you must not complain if these necessary articles are not on hand in time to aid in augmenting your receipts of 1884. The reason for trying to impress this upon the minds of all, is the fact that, last year, there were many complants because orders could not be filled as soon as received by the dealers all over the country.

☞ Mr. O. O. Poppleton, of Williamstown, Iowa, has sent us the following extract from the New Hampton *Courier*, on the subject of bee pasturage:

> Look out for the spread of alsike or melilot clover in the grain fields. British millers say its seed come to them in California wheat; they are highly objectionable from the odor, and it is hard to separate them from the wheat. We notice that this clover is becoming a positive nuisance along the roadsides in some portions of northern Illinois. We drove along roads this fall where the alsike was so abundant and so tall, that it was with difficulty two teams could pass each other. It hid the fences as effectually as snowbanks ever did in winter, and extended completely out to the line of travel. The law about noxious weeds along the roadsides, should be enforced against this pest.—*Prairie Farmer.*

The above extract from the editorial columns of the *Prairie Farmer*, is about as stupid a blunder as is possible to make. It speaks of alsike clover (*Trifolium hybrida*) as being identical with melilot clover (*Melilotus alba*), while in fact, the two plants bear no more resemblance to each other, than does common clover and milkweed. Alsike clover very much resembles common red clover, and on some soils makes more valuable forage than red clover. Its seed is also very valuable, bringing from $8 to $12 per bushel in the wholesale markets. It is utterly impossible for it to become a roadside nuisance, as it rarely grows over 2 feet high.

Melilot or sweet clover is, of course, the plant referred to by the editor. It grows to the height of 4 to 6 feet, and is valuable for the large amount of fine flavored honey which it yields. Some of our best bee-keepers are growing it on their farms quite largely, and the editor of the *Prairie Farmer* could do me no greater service than by teaching me how I can induce this "nuisance" to grow on my farm as thriftly as he says it does in Northern Illinois. I am afraid he thought more of the little trouble it happened to make him personally, than of its real value in furnishing such a bountiful yield of one of our sweetest and purest productions of nature.

The idea that its seeds are objectionable to millers is a new one, and I am very much inclined to think that it is another blunder, the seeds of another kind of clover being referred to. I judge this is so, from the fact that the seeds of both, the Alsike and melilot clover, are so small as to be quite readily separated from wheat.

O. O. POPPLETON.

☞ The Price List for 1884 of Henry Alley, Wenham, Mass., is received. Mr. Alley has inserted the following offer, which our new subscribers may desire to take advantage of:

> The AMERICAN BEE JOURNAL (Weekly) is published by Thomas G. Newman, Chicago, Ills., at $2.00 per annum. To all new subscribers to the above, we will send one of our best queens on receipt of $1.00.

☞ Mr. J. M. Hicks, in the *Grange Bulletin*, gives the following opinions about good tested queens and laying workers:

> A good prolific queen will always lay her eggs in close, concentric circles, and but one egg in a cell. You will also find both sides of the combs filled with eggs and brood alike, which is sure evidence of a fertile queen, which has mated with a drone. Never buy cheap queens, believing them to be as good as the high-priced queens, as there is as great a difference in the real value of queens as in any other stock.
>
> One of the most troublesome things for the apiarist to contend with, is the pest, called a fertile worker, which is frequently very annoying to queen-breeders, as well as to some who only keep a few colonies of bees. You can always know when a hive is posssessed with a fertile worker, by the appearance of the brood in the combs, which is always drone-brood, and very uneven, with many of the cells containing from two to six eggs in each, as well as several cells having none.

☞ We now club the *British Bee Journal* and our Weekly for $3.50. See change in prices on first page.

Test for Purity in Honey.

Mr. W. K. Williams, Buffalo, N. Y., asks us to give in the BEE JOURNAL a test for pure honey. We have several times given tests, but it is well to repeat them. The following is the test in common use in chemical laboratories for detecting glucose in honey, as given by Prof. W. C. Preston, of the State University, Iowa City, Iowa, who remarks as follows:

Having noticed in your excellent BEE JOURNAL an inquiry for some simple method of detecting glucose, allow me to give your readers the test in common use in chemical laboratories.

The test is sufficiently simple, and at the same time very delicate—and may, I think, be stated so plainly that the non-professional reader will find no difficulty in its practical application. It is based on the fact that if to a boiling alkaline solution of blue vitriol, a solution containing glucose be added, a red precipitate of cuprous oxide be immediately thrown down; while cane sugar will give the red precipitate only after protracted boiling. It will be necessary to prepare the following solutions, which may be bottled up and kept for use as required:

1. One-half ounce blue vitriol dissolved in one pint of rain water.
2. Three ounces caustic potassa dissolved in one pint of rain water.

Also procure a test tube about 6 inches long, such as may be found at almost any drug store. Pour into this tube about a tablespoonful of the blue vitriol solution, and add about an equal amount of the solution of potassa—a light blue precipitate will be formed—now add a small quantity of the sweet substance to be tested (it is better to be in solution), and heat to boiling. If even a trace of glucose is present, it will be revealed by the reddish tint immediately imparted to the liquor, best seen by looking down through the tube lengthwise. If there is much glucose, a red precipitate will sink to the bottom of the tube.

It may be well to add that this test does not enable us to detect the adulteration of honey by manufactured glucose, inasmuch as all honey contains a large percentage of the same saccharine substance—but pure, as formed in Nature's laboratory—the nectaries of flowers.

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☞ We have received "Landreth's Companion for the Garden and Farm," which is the Seed Catalogue of D. Landreth & Sons, Philadelphia, for the one-hundredth year. It is splendidly illustrated and handsomely printed. Price 10 cents.

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☞ "One Thousand and One Riddles," by Nellie Greenway, is on our desk. It is published by J. S. Ogilvie & Co., 31 Rose Street, New York. Price 15 cents.

Some Conundrums.

A correspondent sends us these conundrums for bee-keepers. They "will pass in a crowd, if the crowd is large enough," as is sometimes said of ordinary jokes:

Why is a colony of bees like the Bible? Because there is so much in it that we should practice before we preach.

Why are bee-keepers' reports like a load of potatoes, hauled over a rough road? Because only the large ones work to the top.

Why is a bee-keeper like a congressman? Because he gets his pay by his colonies' labor.

How Far will Bees Go for Honey?

The London *Journal of Horticulture* answers the question thus:

This is a question that has been addressed to us by a gardner, who states that bees find their way into his peach house every year, and he knows of no hives nearer than one and a half mile. On this subject Mr. Pettigrew has a short chapter in his "Handy Book of Bees," which we cite: "This question we cannot answer with accuracy. Our experience in this matter goes dead against the wonderful stories that are told in some books. We read of bees flying 4, 7 and 12 miles for food! Our bees will perish and die for want of food within three miles of good pasture. Our bees here never find the hundreds of acres of Heather which cover Carrington Moss within three miles of them. In fine sunshiny weather bees go farther from home than they do in dark cloudy weather. But even in the best and brightest of weather in June and July, very few, if any, find their way home to their old stand if removed three miles off. Moreover, the return of some bees does not prove that they travel three miles in search of food. It proves that some of them go a little more than one mile and a half from home, and finding themselves on known pastures within one mile and a half of the old place, they return thither, fogetting, as it were, where they last came from. I am, therefore, of opinion that very few bees go more than two miles for food. It is very desirable to have bees near the pasture on which they work. Short journeys are not only a saving of labor to bees, but also a protection of their lives. When compelled to fly far for honey they are often caught by showers and destroyed. In warm genial weather, with a superabundance of honey in flowers, bees will have it. They go beyond the bounds of safety for it. Gentle showers do not stop out-door laborers. Black clouds often send them hurriedly home; but they are frequently caught, and die on the altar of their industry. Hives containing 8 pounds and 10 pounds of bees have lost two-thirds of their ranks by sudden showers in warm honey weather. Bees driven to the earth by showers do not die at once. If the following day be warm and fair the rays of the sun sometimes reanimate these storm-beaten creatures, and enable them to return to their hives."

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 14, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no excitement in the honey market. The demand for extracted honey is improving, but supplies being large, prices keep down. It brings 7@10c. on arrival. Arrivals of comb honey and demand for it, are in fair proportion. A choice article in ½ lb. sections brings 20c. per lb. from store, and 16@18c. on arrival.

BEESWAX—Scarce; brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@22c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@½10c.; dark, 8@9c.

BEESWAX—Prime yellow, 27@29 c.

H.K. & F.B THURBER & CO.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—The extreme cold weather of the past week has put a check on the movements of honey, both in and out, and some slight concessions made in prices. Extra choice, 1 and 2 lb. sections, 17@18c; dark and irregular, 15@16c. Sales for the week about 2,000 lbs; receipts 3,000. Extracted slow; sales about 2,500 lbs., at 8@8½c; receipts light.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Fancy comb is scarce, and prices for the same are firm, but offerings of other descriptions receive little or no attention. White to extra white comb, 15@20c; dark to good, 9@11c; extracted, choice to extra white, 6@7½c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Comb, 13@18c.; strained and extracted, 7@8c.

BEESWAX—Firmer, at 30@31c.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.

BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is rather dull, and supply more than exceeds the demand; would not advise shipments to this market. 2 lb. comb, 16@18c.; 1 lb. comb, 18@20c.; extracted, 8@10c.

BEESWAX—32@35c.

BLAKE & RIPLEY, 57 Chatham Street.

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☞ A meeting of bee-keepers will be held at the residence of W. Cossens, Monee, Will Co., Ills., on Monday, Jan. 28, 1884. All friends of improved management of the apiary, are invited to attend.

A. WICHERTS,
W. COSSENS, } *Committee.*
B. HEYEN,

CORRESPONDENCE

For the American Bee Journal.

Cause of Moisture in Hives, etc.

JAMES HEDDON.

Although I have enough writing on apiculture without opening any controversy. yet when such is opened by others, and by misunderstanding or intent I am misunderstood or misrepresented, not to have an uncontrolable desire to reply would be something more than human.

Allow me to call attention to Mr. Corneil's quotations from my articles. After reading them can you see why Mr. Corneil should suppose that I thought that the dampness in hives was mainly due to an accumulation of moisture caused by the absence of heat after the death of the bees? It seems to me that I have said enough in past articles,to give any reader who reads my articles as closely as Mr. Corneil must have done, to understand that I was aware that respiration and transpiration were the main causes of dampness in bee hives.

In examining my colonies in the spring, when a portion were dead and a portion alive, on several occasions I found much more dampness in the dead colonies than in the live ones, when all were treated precisely alike. Many colonies had a lesser and some a greater portion of their numbers dead, and in almost exact propotion to the numbers of living and dead so I found the moisture. This might lead some, and undoubtedly would lead Mr. Corneil to pronounce moisture the cause of the mortality, but I pronounced it the effect, and will present to you, what are to me, valid reasons for such a decision. First, if moisture is the cause of dysentery, why does not the moisture folks account for numerous such instances as given by Mr. Balch on page 6, current volume? Secondly, there is a law by which it is an effect in such cases as I have mentioned. During such temperature as we have at the season of the year mentioned, moisture seeks the colder substances and places, upon the same principle that the pitcher of ice water placed upon the summer dinner table gathers moisture upon its outer surface.

Upon this principle you see, as long as there were live bees enough in a hive to keep the temperature above that surrounding it, no excess of moisture would take place. As soon as no life was left in the hive, and a rise in temperature left the combs, honey, etc., colder than the outside air, condensation would take place in the hive on the same principle that our cellars are damper in summer than in winter. Said dampness does not come from the earth, but from the warmer atmosphere outside, governed by the law above mentioned. That the bodies of the dead bees may contribute to this accumulation of moisture, I have reason to believe. Let it be remembered that I am all along referring to times when the temperature is above the freezing point—such times as we are examining our colonies.

Mr. Balch has given us facts regarding the condition of his bees when taken from the damp repository, facts to which I was an eye witness, as I have been to others similar. We want to believe and know the truth, whatever it may be, and we appreciate learned theorizing, especially if correct, but it cannot force itself upon us as such while running contrary to such facts as given by Mr. Balch. To reply to Mr. Balch's last question in his valuable article, I will say, that before I kept bees I learned from observing others, that the best way to gain self-respect, as well as the respect of others, was to frankly own right up when knowingly beaten in discussion. That open confession was not only good for the soul, but wholesome for the opinions of others. In recalling to memory all that I can of my controversies with Mr. Balch, I call to mind no other occasion for such concession. If I remember correctly, this occurred in the second year of my bee-keeping, and upon that ground I ask Mr. Balch to excuse my weakness in supposing that his bright, healthy bees ought to have been all dead coming from such a damp, moldy pit—more especially when this dampness was a common dread, and even yet our scientific friend across the line believes it to be the Gorgon of our honeyed hopes.

Let me say to Mr. Turner that my case without the divisions (which he did not use) is not my case at all, nor is it worth the tenth part as much as the one I use, in my estimation. With our leading honey-producers, the tide has been steadily moving away from the use of glass in surplus-storing supers or cases, and when with this class of bee-keepers the tide turns back upon itself, will be time enough for me to begin to think of going back over the old, old ground. Mr. Turner cites to my average yield of honey. No greater mistake has ever been made than that of attaching importance to the arguments of him whose name appears under a big report, simply because of such report. First, is the report true? Secondly, if so, are the conditions causing it necessarily coupled with great wisdom? Here, we have not had much over half a crop of nectar secreted by the flora since I first saw the name of Mr. Turner, and, perhaps, since Mr. Turner first saw mine. I am not old enough to yet have reached my first year of dotage.

I believe I knew less about bee-keeping, in all its branches, ten years ago than at present. At that time I scored pro rata yields far in advance of that reported by Mr. Turner, and I think equal to any thing I have seen reported this side of the Rocky Mountains. If I should get another such yield the coming season, shall I re-write my article against the use of movable-sided cases? Mr. Balch's article, seems to me, to be a concise answer to one in the same issue by Mr. H. V. Train.

The report of Ira Barber, on page 12, deserves more than a passing thought. A young man reported similarly upon the same subject about 12 years ago at our Kalamazoo Convention. If bees kept in so high a temperature can crawl outside and void and go back with safety, as inferred by Mr. Barber, most assuredly they can breed, and use all the pollen they desire. But it seems from this extensive experience that even in so high a temperature, as a rule, there is no breeding (see fourth line on page 12), and if such be the case, I should not expect any consumption of pollen, as a free and unrestricted choice of food is left to the bees in such temperature. This is the fourth or fifth time that my attention has been called to this principle, and though it has worked considerably upon my mind each time, never more strongly than now, for Mr. Barber is known to us as a practical man of integrity and ability, and his report is upon a scale sufficiently large to make it more valuable. While this high temperature may save the bees, again the low tempered cellar is not a cause of the disease, because many are the apiaries that come out of such cellars in excellent condition.

I wish Mr. Barber would tell us more about it. Tell us how long he has wintered in this high temperature. All about his successes and failures, and conditions accompanying them. Where is Dr. Southard upon this wintering question? Come out Doctor and give us your experience, observations and conclusions. No matter with whom they may run crosswise, we cannot afford to do without them.

Dowagiac, Mich.

For the American Bee Journal.

"Button Bush Honey" Again.

REV. M. MAHIN, D. D.

In the BEE JOURNAL of Jan. 2, 1884, R. S. Becktell writes about button bush honey, and says that it is far inferior to buckwheat honey, that it has a very sickening taste, and that it is black and stingy. I am very certain that he is mistaken in supposing that the honey he describes was gathered from button bush, and that while his bees were working on that shrub they were getting large quantities of honey from some other and unobserved source.

Button bush (*cephalanthus occidentalis*) used to abound in this section, until the ponds were drained and cleared up; and in the earlier days of my bee-keeping my bees gathered a good deal of honey from it.

I am sure that Mr. Becktell is mistaken, because while button bush abounded in the locality of my apiary I have never seen any such honey as he describes, and his must have been gathered from some plant that does not grow in this vicinity. I have had abundant opportunity to determine the quality of button bush honey, having repeatedly removed it with the extractor almost as soon as it was gathered. In color it is as light and clear as white clover honey or any other I have ever seen. Its flavor is mild and pleasant. But it has one disagreeable quality—it will begin to granulate almost as soon as it is stored. I have found little round pellets of sugar to abound in it, when extracting it in the month of August. But notwithstanding its propensity to granulate, I will take all the button bush honey I can get.

New Castle, Ind., Jan. 2, 1884.

* * *

For the American Bee Journal.

The New Races of Bees.

FRANK BENTON.

Coming from a man whom I have been accustomed to regard as pretty generally correct in his conclusions in regard to bee matters, and honest in the statement of the same, the views of Mr. G. M. Doolittle, as expressed on page 500 of the BEE JOURNAL for Oct. 10, surprised me exceedingly. All my experience in bee-keeping has tended to make me value prolificness in a queen above all other qualities—to regard it, in fact, as the basis of all success in honey-production. If we have the workers in a hive when the harvest opens, we are sure of honey. This Mr. Doolittle will not deny, nor can he say that the individual workers of the Eastern races are not the best of honey-gatherers. But he admits, yes, even claims it as a *fault*, that the queens of the "Holy Land" bees, as he calls them, are extra prolific. Where, then, lies the fault? What is the reason Mr. Doolittle finds these bees "practically good for nothing for his locality?" He says: "These bees seem to think that a large flow of honey should mean lots of brood, so at brood-rearing they go." (That is just what I want them to do whenever the weather will permit.) Then follows the statement that, "when fall arrives, we have a hive overflowing with bees." (That is what I want and can have, not in the fall. alone, but from spring until fall with these bees.)

Further on he says: "All are aware of my views regarding the secret of honey-producing being to get the bees just in the right time for the honey harvest (neither too early nor too late), that being of more moment than any one other thing pertaining to honey-producing. Admitted. But he gets his bees "when fall arrives!" Oh, well, the next sentence sets that all right (?) "That the Syrian bees cannot be thus managed in this locality is the reason of my saying they are practically good for nothing." Passing by, for the moment, the fact that Mr. Doolittle starts out with "Holy Land" bees and concludes with a very different race, the *Syrian* bee, I would point out here that Mr. Doolittle, after having admitted that these Eastern bees are especially inclined to rear brood whenever food is coming in, then says he fails to get his hive filled with bees until fall, and follows by saying that he cannot manage these bees so as to get the workers ready for the harvest. And this is a simple confession on the part of Mr. Doolittle that he cannot accomplish what, to use his own words, "is of more moment than any one other thing pertaining to honey-producing." How does this agree with his reported success in raising comb honey! Why, if I should take an apprentice in bee-culture, this would be one of the first things I would teach him! and with no bees could it be more easily accomplished than with Eastern bees?

Mr. Doolittle further says: "They have another exceedingly bad feature, which is, that before the young queens are fertilized in the parent hive which has cast a swarm, fertile workers spring up, and the result is a queenless colony." Not at all. If left to themselves the young queens of Eastern races are just as sure as those of any other race to become fertile and commence laying, and if fertile workers have commenced laying in the hives, they will almost invariably disappear without occasioning the least trouble. Eastern bees are more liable than other races to have fertile workers. Palestine (Holy Land) bees more so than Syrians. But this "bad feature" is by no means such a difficult thing to cure with them as with other bees. I usually give little heed to it; introduce queens, even virgin queens, put in queen-cells, or give them brood and let them rear a queen. This they rarely fail to do, but carries with it the objectionable feature of allowing the fertile workers time to get nice worker-combs filled with drone brood, and to waste honey in rearing these useless fellows. These are, in my opinion, by far the worst features of the fertile worker tendencies of the "new races."

In his closing paragraph, Mr. Doolittle gets back to the race of bees with which he originally stated, the "Holy Lands." He says: "However, as in all respects, unless it is in wintering, they are inferior to the Italians. I felt warranted in doing away with them entirely, and, to-day, finds my yard without a Holy Land bee in it." Now, if Mr. Doolittle really means "Holy Land" bees, that is, bees from Palestine proper, and not from Syria, and will throw in the "wintering" and leave out most of the "respects," I will agree that the statement is correct. In other words, the bees that come from south of the mountain-range that extends from the Sea of Galilee to the Mediterranean, terminating in Mt. Carmel, the true "Holy Land" or Palestine bees stand in my list of good bees, fifth, or after Cyprian, Syrian, Carniolan and Italian bees. They are inferior to Italians in temper, in not clinging to the combs, in wintering qualities, and in that they are more easily pestered with fertile workers, and, though superior to Italians in beauty, in prolificness, in defending their hives, in strength and rapidity of flight, and in diligence in collecting stores, still on account of the grave faults just mentioned, I put them, all in all, after Italians. They are the smallest bees of the species *Apis-melifica* that I have ever seen. Their pointed abdomens usually show three lemon-yellow bands, but all are not equally well marked, the variation in the same hive often being quite striking. Their bodies show a remarkable elongation when filled, and such workers, if well marked, are very handsome. The thorax, the edge of each abdominal ring, and the tip of the abdomen are covered with very dense gray fuzz giving them the appearance of having been dusted with flour. The drones, especially, have a very thick coat of iron-gray fuzz on both thorax and abdomen. The queens have rather elongated bodies, often a beautiful yellow in color, though many of them are leather-colored. Palestine bees are very liable to fly into a passion upon slight provocation, and when once aroused, are not easily subdued in any way. I have noticed a remarkable variation in the disposition of different colonies of these bees. This, with their irregular markings, is a proof that the race is not well established, that is, it leans first toward one type, then toward another.

In general, these bees are difficult to manage. They crawl from the frames upon one's hands, and quite impudently creep under sleeves and cuffs, biting the flesh, and then often curving their bodies and stinging. They crawl on the combs and drop off much like black bees. In a cold climate they die off in winter and spring, somewhat as did the Egyptian bees when brought to Europe and America; in fact, after four years' experience with the bees of Palestine, I regard them as constituting an inconstant race, forming a connecting link between the Syrian and the Egyptian bees, resembling more nearly the Egyptians than any other race, yet to be preferred rather than the latter, although not equal to the Syrians. Such is the true "Holy Land" bee.

Going northward on the mainland lying adjacent to the Mediterranean we find, after passing the mountain range above mentioned, a very different bee—the race of Syria proper. These bees are larger and more golden yellow than those of Palestine, very uniform in general color and markings. The queens are generally larger, a greater number are yellow rather than leather-colored, and they are even more prolific than the queens of Palestine. The drones, instead of being such a complete gray in color, are more or less mottled with yellow. The workers do not run on the combs, nor do they drop off at all. They can be handled much more easily than the bees of Palestine, and, even if aroused are less vindictive. They are beautiful bees. The fuzz on their bodies is brown, with just a tinge of gray, and the three golden-yellow bands are distinct and never lacking. The type is well fixed, and in all parts of the Lebanon only a distinctly golden yellow, active, strong-winged race is to be found, which distinguishes itself for its prolificness and its good honey-gathering qualities. In short, we see here a race far more closely related to the Cyprians than to the Palestines, and, like the Cyprians, they winter better than do Italian bees; while, with care, they can be manipulated more rapidly than Italians. Such is the Syrian race of bees, which, if introduced into America in its purity, cannot fail to find favor with the mass of intelligent apiarists.

I never recommended the "Holy Land" bee further than the above recommends it, and, though I have better facilities for procuring these bees than the Syrians, and can get them at a somewhat less cost, yet I must state my conviction that, of the two races, the Syrian is decidedly the preferable one. I have addressed many queens of each race to Europe and America, and have never failed to mark plainly on each box the name of the locality from which its contents came, so that if, in the face of my remonstrances, some have persisted in mixing them together and calling them all "Holy Land" queens, I am not to be blamed for the present jumbled up state of public opinion regarding Eastern bees. Nor should the good bees of Syria forever bear a bad name because somebody chose to make them associate with bad company. For my part I have always called, and shall continue to call, the bees from north of the mountain range mentioned Syrian bees, and to restrict the term Palestine bees to those from the south of that range, leaving the name "Holy Land" as applied to bees for such as have a mortal dread of being too exact in their work and modes of expression.

Munich, Germany, Nov. 3, 1883.

[Mr. Benton makes a fine distinction between Syrian and Palestine bees. A glance at the map of Asia will show that Palestine is a portion of Syria bounded on the North by Lebanon, and on the South by the Desert of Arabia. Syria comprises this whole land, but runs North to Asia Minor, and East to Persia. It might be said with as much propriety that natives of the United States, Canada, Mexico, or any other Province or Country in America, were not Americans! There may possibly be a difference in the bees of Northern Syria or Palestine, but the bees of Palestine, or the "Holy Land" (as some call them), are as properly named Syrian, as the inhabitants of Mexico are called American, or the people of Scotland called British.—Ed.]

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☞The Mahoning Valley Bee-Keepers' Association, will be held in the Town Hall at Newton Falls, on Thursday, Jan. 24, 1884. As this is the meeting to elect officers, every member and all interested in the production and sale of honey, are requested to be present.

E. W. Turner, *Sec.*

For the American Bee Journal.

Premium List for Bees and Honey.

W. Z. HUTCHINSON.

I see by page 643 of the Bee Journal for 1883 that I am called upon for an article upon the above subject, and that Mr. Clute also desires criticisms upon the list that he has offered. Before reading Mr. Clute's list, I had prepared one which I intended offering to the committee on the revision of the apiarian department of our state fair premium list, but after reading Mr. Clute's list I feel like making a few slight changes. The premiums offered in the poultry department of our state fair premium list amount to over $300, and, like Mr. Clute, I had placed the amount of premiums in the bee-keeping department at about $300.

In regard to offering premiums upon the different varieties of bees, I think the amount offered should be the same upon each variety. As to which is the best variety, opinions differ; and it does not seem right that the one who prepares the premium list should decide which is the best variety, and then put the highest premiums upon the kind that *he* considers best, and more upon the one that he considers the least desirable. Upon each breed of hens the premium is the same, and the same is true of different breeds of cattle and sheep, why should the bees be made an exception?

If we can have suitable buildings, I too, should be in favor of public manipulations with bees, but I am decidedly opposed to allowing bees their liberty on the fair grounds, at the same time that visitors are present; I have seen too much trouble from this source. Just as soon as our bees become a nuisance at fairs, and annoy the public, just so soon will we be obliged to "fold up our tents and steal silently away."

I also object to the putting of comb honey on a par with extracted honey. To bring comb honey to a fair, that is, enough to make a creditable display, is a risky undertaking, much more than the bringing of extracted; and the man who takes the risk should be suitably rewarded.

The classification of honey into "white clover," "linden," and "fall honey," may be well enough in the west, but I think it unnecessary here in Michigan, as we seldom fail of having some of all three kinds.

The offering of separate premiums upon honey-producing plants pressed and mounted, and those in bloom, seems to me undesirable, for the reason that, at the time that fairs are held, only fall-blooming plants could be exhibited in bloom, while flowers can be pressed and mounted so nicely, as to be *almost* nicer than when in bloom.

Neither do I like the plan of offering premiums upon so many different points in bee hives, I would offer a premium for the best hive, all things considered.

There is just one more thing that I would "tear to pieces," and that is the offering of a premium, for the largest yield of honey from one colony and its increase; not but what bee-keepers would honestly report, but some one who failed to get the premiums might think differently, and there might be hard feelings, criminations and re-criminations. Let no premiums be offered upon *anything* that cannot be shown and *proved* by the exhibit. There are some things that Mr. Clute has not mentioned upon which I would offer a premium, but the list that I append will show what they are.

I am thankful, indeed, that Mr. Clute has "stirred up" this matter, and that too, in just the "nick 'o time."

	First Prem.	Second Prem.
Best colony Italian bees in observatory hives	$10 00	5 00
Best colony Syrian bees in observatory hives	10 00	5 00
Best colony black bees in observatory hives	10 00	5 00

Note—The observatory hives must have at least two sides of glass. In awarding premiums purity of race and numerical strength must be considered. Bees must not be allowed to fly while visitors are present.

Best and largest display of full colonies of different races of bees	$10 00	5 00
Largest collection of queen bees, alive	8 00	5 00
Largest display of bees under glass, so arranged as to be handled by visitors	10 00	5 00
Largest and best display of comb honey	20 00	10 00
Largest and best display of extracted honey	15 00	8 00
Best specimen of comb honey, not less than ten pounds, quality and manner of putting up for market to be considered	10 00	5 00
Best specimen extracted honey, not less than ten pounds, quality and manner of putting up for the market to be considered	8 00	4 00
Best 10 pound beeswax	5 00	3 00
Largest and best collection of honey producing plants, pressed and mounted, or in bloom	10 00	5 00
Largest and best collection of apicultural literature	10 00	5 00
Best bee hive, all things considered	10 00	5 00
Best honey extractor	8 00	4 00
Best comb foundation machine	10 00	5 00
Best specimen comb foundation	3 00	2 00
Best bee smoker	3 00	2 00
Best honey knife for uncapping	2 00	1 00
Best wax extractor	3 00	2 00
Best section honey box	2 00	1 00
Largest and best collection of apiarian implements	10 00	5 00
Largest, best, and most interesting and instructive exhibit, all things considered	10 00	5 00

Then, friends, as Mr. Clute says, "I am quite willing that this list of mine shall be knocked into splinters, if from its ruins can be evolved the perfect list;" but you must be lively about it, for the time when these lists must be used is close at hand.

Rogersville, Mich.

◆

For the American Bee Journal.

Essentials in Comb-Honey Racks.

GEO. F. WILLIAMS.

As bee-keepers are waiting for the coming of spring in order to begin active operations among the bees, it seems to me that this is the very best time for a discussion of section racks. I think that a friendly discussion of those racks in use, with suggestions as to their improvement, founded both on fact and reason, will ultimately lead to the adoption of the best. Some racks are adapted to individual hives only, but to be the acme of perfection they should be suitable for any hive, no matter how made, and to a frame of any size.

The following are the principle features which I think must be combined in a perfect rack:

1. It should be made solid, having no movable sides.
2. There should be no partitions.
3. It should be so made and arranged that the bees have direct or continuous passage ways from the brood chamber into the sections; there should be neither honey-board or bee-space between the brood chamber and sections, nor should there be a bee-space between the different tiers of sections.
4. It should be reversible.
5. It should be so made as to serve as a half-story on a single-walled hive, without an extra covering.
6. It should be so arranged as to permit the bees to ascend from the outside of outside combs directly into the outside of the side sections.

As to the first, durability, if nothing more, would be a sufficient argument in its favor; but there are others,—convenience in handling, no falling apart, always in shape and ready for use.

Never in my experience as a bee-keeper, could I conceive why any one wanted partitions in a section rack; it not only costs time and money to put them in, but, when they are in, they occupy space that ought to be filled with sections.

On page 637 of BEE JOURNAL Mr. Heddon quotes more than a column from the specifications of the Langstroth patent, in order to demonstrate his 4th principle upon which all hives should be constructed, viz.: That "the sections should never rest on each other or on the brood frames."

At the bottom of the middle column on the above page we find this: "This shallow chamber, while it greatly facilitates the storage of honey in large receptacles, is especially adapted to securing it in small ones, which usually meet with the readiest sale."

After-experience changed Mr. Langstroth's views, which, had Mr. H. known, he probably would not have quoted quite so much; for on the very next page he (Mr. L.) says: "I see no reason why sections for comb honey may not be set, to the best advantage, directly on these sheets. Before giving up my apiary, I found that small boxes were much more readily filled by Italian bees, when put directly on top of the frames; and that, however admirably the shallow chamber answered for black bees, the Italians plainly wanted nothing to do with it."

The advantage of setting the rack directly on the frames are:

1. The bees will not fasten it so tightly as where the bee-space and honey-board are used. Every bee-keeper knows what an amount of comb is generally built in the bee-space and consequently of the effort required to remove the rack. 2. The building of these pieces of comb requires time and material, hence we arrive at our second reason, viz.: Less work for the bees and no waste of wax.
3. The bees will go into the sections much sooner.
4. More comb honey.
5. Easy and quick manipulation.

By the use of a reversable rack we get our combs built solidly against both the top and bottom of the sections, which adds very much to the appearance of our honey as well as to its stability, which advantage can not be over-rated when it is to be handled much, or shipped to a distant market.

I remember, when at the Cincinnati convention, over a year ago, D. A. Jones held up a section of honey and told in his forcible manner, how to get comb honey that would take the premium every time. It was simply to reverse the sections when partly filled.

As racks are generally made, the bees can not pass directly up from the outside of the side comb into the sections, but they must go in toward the center of the hive until they come to the passage between the first and second rows of sections, before ascending. That this is a disadvantage any one can well see; for we wish to give our bees every advantage possible, because upon so doing we add just so much to our profits, be it ever so little.

If this improvement was made to all racks, I think there would be less complaint that the side sections were the last to be filled. It may be that we are laying the blame of half-finished side sections on the glass sides of some crates, while the want of a direct passage way is just as much to blame.

New Philadelphia, O.

For the American Bee Journal.

Dysentery without Pollen.

WM. F. KANZLER.

We, the readers of the BEE JOURNAL, are under very high obligations to Mr. W. Z. Hutchinson, for he brought before us Dr. Donhoff, a very competent witness in our pollen controversy, in Vol. XIX, page 641. Dr. Donhoff was a great chemist, and a close observer, and settled, microscope in hand, many disputed questions in bee-life. Please allow me to add some more facts brought out by Dr. Donhoff.

1. Cold is the cause of dysentery. Dr. Donhoff brought well-filled bees, in two small boxes, and put one of these boxes under his shirt on his breast for 24 hours, where the thermometer showed 72½°; the other box he placed in a room where the temperature was 50° to 59°. In opening the boxes, after 24 hours, he found the first box as clean as before, but the second box, kept in the colder room, soiled with discharges. After repeating this experiment several times, and giving the same results, he concluded that bees, if they live in a temperature of from 50° to 59°, will contract dysentery—(*Apendix to F. Huber's work, Vol. II, page 244, by G. Kleine.*)

Any one who will repeat this experiment can get well-filled bees, if he follows the advice of Mr. Doolittle—whose writings are an honor to our valuable JOURNAL—and disturb a colony of bees, then they will rush head foremost into cells and fill themselves, and in so doing each one can be secured by their wings.

2. Dr. Donhoff dissected bees in November, and did not find a particle of pollen in their stomach, but found pollen in their intestines in February by bees which had brood, and by those which had no brood (II, 274).

3. Prof. Leuckart, another great chemist, found by dissecting in November no pollen, but in the middle of December; and was able, out of the excrement of the plants, to tell wherefrom the pollen was gathered (II, 241).

4. In the stomach of the queen and drones no pollen has been found (II, 242).

Thus, it is proved that bees eat pollen, but it is not proved that out of the eating dysentery will follow, for, in the experiment at No. 1, we find dysentery without pollen.

Spencer Co., Ind., Jan. 1, 1884.

For the American Bee Journal.

Stings and Their Poison.

R. J. KENDALL.

I was much interested in reading the report of the second day's Michigan state convention, and especially that portion devoted to "Is Bee Keeping Healthful?" The title struck me as being novel for I thought the healthfulness of bee keeping was one of the settled things of life, and that the thing had definitely advanced from theory to fact. But from the expressions given at the convention, my ideas on this score are shown to be mistaken utterly.

When bee keepers like James Heddon, Dr. Mason, Mr. Millard and possibly hundreds of others, whose experience I do not know, state that bee sting poison renders them nearly "helpless," it is indeed a revelation to one like me who had got it firmly fixed in mind that the poison from stings merely had ill effects at the start. In fact I had began to believe that stings were like tobacco,—only made one sick for the first, but afterward became more desirable than otherwise.

In a late JOURNAL I read an article that tended to prove that the acid bee poison was really of great benefit to the human system. This illusion is dispelled.

My own experience has been of such a nature as to render me a little skeptical of the beneficial and delightful results from bee stings. But in spite of this experience when I read what Root, Quinly, Newman, Cook, and in fact nearly all the writers say about it, I thought I must be mistaken, and that I was not hurt at all, in spite of the convincing nature of a bee sting, in popular imagination.

I began keeping bees by getting one colony said to be Italians, in the fall of 1882. I got them in October and they had plenty of winter stores. During the few days of autumn and the fine days of early winter, I used to open the hive, take out the frames and look them over (to learn something.) I took off the roof and put my face close to them. I had no cover on my face or hands, and used very little smoke indeed. I never received a sting. By May 1883, my brother had divided this colony, getting stung a few times. In May I got three more full colonies of "Italian" bees, said to be very gentle, and when the apirist from whom I bought the three looked at my others, he pronounced them Cyprians, and told me I would have trouble in handling them.

When I had got them all together and looked at them evenings, I began with bare hands, arms and face. The bees soon taught me, if I wanted to be presentable during the day at the office, I must wear a veil over my face any way. My hands got stung all the same and all the bees seemed alike. There was not a pin to choose between them. Those stings felt like the prick of a pin and came usually so unexpectedly that I had proven myself not to be the "captain of the Pinafore" before I could recollect that I had sworn off swearing.

The stings were followed by swelling, but the pain was no more than that caused by a pin's smart. The swollen parts felt water-soaked like dropsy, and at first a slight dull ache was felt if I pressed them and they then subsided with itching.

So things went on, the bees getting worse instead of better. I might be as gentle as a mother with her new born babe and speak as kindly to them as my tongue could frame words, but it was of no use, they got to hate the very sight of me, apparently, as much as a debtor does a dun, and would have no truce at all.

In the latter part of July, or early in August, I was handling them one day and got two or three stings, one near the heel. These stings instead of going on painlessly swelling, rankled, and hurt keenly for some half an hour, *but they did not swell at all.* I could not understand this. It was new to me. During the latter part of the summer, and through the autumn the bees kept on being savage, and I took to wearing gloves. Then I could handle them.

On Christmas day, 1883, I opened my hives and looked them over and got one sting that *neither hurt nor swelled* beyond the preliminary prick. Here was another phase of the matter.

Perhaps it should be stated that the year 1883 has been a failure, so far as a honey crop is concerned, and I have not taken a pound of honey from the bees, but on the contrary had to feed them. There my first year of experience with bee stings ends.

I have learned this, that the effects of the sting vary on my own person. Is this caused by change in myself, or by the temper the bees happen to be in? And, again, does the temper of the bees result or be affected by the honey flow?

I think if this question of stings and results were investigated a little more, it might have much result in the number of bee keeping beginners, and might reduce the "Blasted Hopes" list to a minimum. Many inquirers into the mysteries of keeping bees, might possibly deem the game not worth the candle, if they have to expect ill effects from bee stings permanently, and think that to be helpless almost, is paying a little too dear for keeping bees; and surely no one will contend that it is not better to give such clear warning rather than let them buy their experience by being stung—and then getting so disgusted as to throw it up.

Again to professional bee keepers, being stung is no luxury; and if stinging could be controlled it would be to them a boon. Smoke will not always control bees, neither will offering them sweets. They would rather sting than eat, sometimes. As to embrocations; well, so far as I am concerned, they seem to do as much good as if I spat on my fingers and snapped them, and no more. What can be done then? I do not know; but I do think, if we could have a few experiences that we would arrive at so much of a solution as to get a pretty good line towards it. In this hope I have ventured to trouble you with mine.

Austin, Texas.

For the American Bee Journal.

Experience with Cellar Wintering.

HENRIETTA F. BULLER.

I have just been reading Mr. Balch's account of his success in wintering bees in a cellar dripping with moisture, and his hives all sealed up tight on top. He ought also to have told the temperature of his cellar. Perhaps he will do so at some future time.

Mr. Ira Barber advocates a very high temperature, and says: "Keep the bees warm, and they can eat all the pollen they care to; and, unless some of them get to breeding, you will see no sign of dysentery." How does he keep them from breeding in such a high temperature?

In 1881 I put 3 colonies in frame hives and one in a box hive into a newly built bee-house, which was quite damp, and the temperature was never above 38°, and often down to 34°. The frame hives had cushions filled with sawdust over the frames, and bees were strong in the spring, when I took them out; the combs were dry and the bees healthy, no spring dwindling. The box hive with a small hole in the top, got very damp, and the bees all died before the winter was half over.

In 1882 I put 8 colonies in frame hives and one into a box hive into the same house, which was then dry. They were provided with cushions as before; the temperature about the same, and the results the same. The bees in frame hives all did well; those in the box hive died. Before I put my bees away I was advised to leave the waxed quilts I used in summer over them, and put chaff cushions on, but I said, "no, thank you." The person who gave me the advice put 60 colonies away in a cellar under a barn; I presume, though I am not sure, with the waxed quilts over them, and all but 12 of the 60 were dead in the spring, and they even were very weak. He says the honey was sour, but, no doubt, it was sweet enough when the bees stored it.

Mr. Balch thinks more bees are killed by having the repositories too dry than too damp, but, judging from the amount of frost that accumulates in the ventilating pipe in cold weather, I should say the breath of the bees, or the evaporation from them must keep the air moist enough.

In 1880 I began with 1 colony of bees in a box hive, which I transferred to a frame hive. The next year I Italianized them, and this fall I had increased my stock to 29 colonies, and had a surplus of 350 pounds of comb honey and 800 pounds of extracted, this last summer.

Campbellford, Ont., Jan. 5, 1884.

Local Convention Directory.

1884. *Time and place of Meeting.*

Jan. 22-24.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.

Jan 23.—S. E. Mich., at Adrian, Mich.
H. C. Markham, Sec.

Jan. 24.—Mahoning Valley, at Newton Falls.
E. W. Turner, Sec.

Jan. 28.—Bee-Keepers' meeting at Monee, Ills.
A. Wicherts, W. Cossens, B. Heyen, Com.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Convention Notices.

☞ The Southeastern Michigan Bee-Keepers' Convention will be held at Adrian, Mich., in the Plymouth Church Chapel, Jan. 23, 1884; morning, afternoon and evening session.

H. D. Cutting, *Pres.*
H. C. Markham, *Sec.*

The 15th annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 22, 23 and 24 days of January 1884.

This will be the largest and most interesting convention of bee-keepers ever held in America. Many of the most scientific apiarists in the country will take part in the discussions. The programme is completed, and comprises all the interesting topics of the day. The question box will be opened each day, and the questions answered. All are invited to send in questions.

Implements and other articles of interest for exhibition will be received and properly arranged. It will pay any bee-keeper to go a thousand miles to listen to the discussions. By hearing and seeing, you will obtain much more knowledge than by reading. Five hundred bee-keepers will be in attendance. Reduced rates of board at hotels have been secured. All are invited.

Geo. W. House, *Sec.*
W. E. Clark, *Pres.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Sections, Brood Frames, etc.

Please answer the questions, as below, in the BEE JOURNAL:

1. Which way should the sections stand on the hives? As the frames run, or across the frames?

2. Should the frames come flush with the top of the hive, or should there be a quarter of an inch space between the top of frames and the bottom of the sections or rack?

3. How wide should the tops of the brood frames be? I have used an inch, and placed the frames one-half inch apart, but I see Mr. Cook says, ¼ inch apart.

4. What space should there be between the floor board and the frames, and between the sides of the frames and the hive?

5. Are reversible frames any good?

6. Do any of the bee supply men put wired foundations into frames?

New Jersey, Jan. 2, 1884. H.

ANSWERS.—1. I much prefer to have the sections run parallel with the brood frames for too many reasons to enumerate here, while I know of no advantage of their running crosswise.

2. By all means allow a space above the brood-frames of 5·16.

3. After considerable experiment in using different width top-bars to brood-frames, I prefer a bar ⅞ wide, and place them about 1⅜ apart, from centre to centre, using 8 frames in a hive, whose inside dimension, crosswise, is 11½ inches; thus we have 9 spaces between frames and sides of the hive, each one being very nearly ½ inch.

I hardly think Prof. Cook means to allow only ¼ inch space between frames—perhaps it is a misprint.

4. Between bottoms of frames and bottom boards we allow ⅝ of an inch, calculating the day will come when shrinkage will make it about ½ inch. If there was no objection we would use a space of one inch between the sides of the frame or ends of the frame (I suppose you mean) and hive. But there is an objection; the bees will build comb in so large a space. We can use a space as large as ⅜ of an inch, provided the end-bars are ½ inch thick by ⅞ inches wide, without any danger from comb-building there. The larger the space the greater speed gained in handling combs.

5. I have never used reversable frames. A few have told us they were the "coming frame," and then it was all still again, and we hear not the foot-steps of their "coming." Upon reading the claims of their advocates, I made up my mind that any advantages in them would be more than counter-balanced by disadvantages.

6. I think very few use wired foundation; nearly all now wire their frames and then press the foundation on to the wires by hand, or with a press.

Wintering Bees in Canada.

Will Mr. Heddon please answer in the Weekly BEE JOURNAL?

1. Would you advise wintering out doors in Prince Edward County, Ont., which, I think, is about 2° north of Cass County, Mich?

2. What kind of a cover would you advise for a two-story hive, which appears to be the best for all purposes after a good trial.

CLOWES NOXON.

Northport, Ont.

ANSWERS.—1. As both in-door and out-door wintering, each in turn, prove the best in both northern and southern latitudes, and as the true cause of loss in winter is not yet understood, I do not feel justified at present in saying other than try both ways, and hold fast to that which proves best. I have wintered both ways nearly every winter, for 15 years, and have found out-doors, with proper protection, to give me the best results.

2. We use a ⅝ board cover cleated on either side, or more properly on each end, painted both sides, and I prefer it to any other tried; this is for summer. For winter, we cover with burlap and shavings, leaves or chaff, and this cover over all. I agree with you in decidedly favoring two-story hives.

Foundation, Winter Flights, etc.

1. Is foundation that has been made more than a year, drawn out as readily by the bees as that fresh made?

2. Would it be advisable to place screens over the entrance of hives in the cellar, to prevent the bees from flying out?

3. Is it absolutely necessary to give bees a flight in this northern climate?

M. B. HOLMES.

Delta, Ont., Dec. 29, 1883.

1. While it is quite true that other influences often have more to do with the readiness with which bees draw out comb foundation than does its age, yet I am well satisfied that freshly-made foundation is the best.

2. No; if the bees find they are imprisoned, they become excited, and this excitement will aggravate dysentery if it is present at the time. A wire cloth box adjusted over the entrance, would confine the bees to the hive and the box, and do no harm, and perhaps accomplish your purpose, but would make quite a bill of expense, if used upon many hives.

3. It is not. Often bees pass long steady confinement from fall till spring, and come through in splendid condition, though frequent flights will often prevent dysentery, when it otherwise would have destroyed the bees. If however, the disease reaches a certain point in its development, a flight sometimes proves immediately destructive to the bees.

SELECTIONS FROM OUR LETTER BOX

Wintering in the Cellar.

My honey crop amounted to about 1,000 lbs. of comb honey, of very fine quality. There was no fall honey, and some colonies are rather light. I have 50 colonies in the cellar.

I. W. ROLLINS.

Elgin, Minn., Jan. 3, 1884.

Packed in Clover, Chaff and Leaves.

I started in the spring of 1883 with 23 colonies, having lost 3 in the previous winter. They increased to 59. I sold 13 colonies and had 6 taken away that I had on shares, leaving me at present 41 colonies, that are all packed in clover chaff and leaves, on the summer stands. I received 733 lbs. of comb honey in sections, nearly all basswood. I use the "Mitchell (square frame) hive," and have added a ½ story for surplus honey. My bees are all Italians or hybrids of blacks and Italians.

H. F. SAGER.

North Bristol, O., Jan. 3, 1884.

Six Years' Experience.

In 1878 I procured 15 Langstroth hives in the flat. After making and painting them, I traded one for 2 colonies of black bees from a neighbor, in the month of May. In September I took 28 pounds of surplus comb honey. The season of 1879 being a dry one, I got no surplus; I bought another colony and 3 Italian queens. In 1880 they increased to 7 colonies, and I extracted to 250 pounds of white clover and basswood honey. On account of a hard winter, my inexperience in wintering, and a two-legged depredator, I had to begin the season of 1884 with only 3 weak colonies; these increased to 5, and gave me a small surplus. In 1882, my bees gave me 2 swarms, and 400 pounds of extracted honey. An incident that transpired in 1882, is worthy of mention. As I was expecting to remove some 20 miles, which I did, and needing money, as I thought, about the end of the honey season, I offered to sell 3 colonies for $30, but found no one who would give that price. On opening those 3 hives a short time afterward, to my amazement, I found them full of honey (about 150 pounds), which I sold for 15 and 20 cents per pound, realizing more money than I had asked for the "blessed bees" one month before. In 1883 I began with 7 colonies; increased to 14; took 1,300 pounds of white clover honey; and bought 6 colonies; so I now have 20 colonies tucked up nicely on their summer stands, where I have always kept them. GEO. W. MORRIS.

Salvisa, Ky., Jan. 1, 1884.

The Cause of Dysentery.

I am pleased to see that the "pollen question" has so much space given to it in the BEE JOURNAL. I have been a firm believer that pollen was the chief cause of dysentery, for the last 8 years. When we assort the combs, putting those having considerable pollen all together, with plenty of honey, the bees have dysentery; while those not having pollen in the hive are free, every time, from it. I expect to be in Chicago at the October Convention, and will try and tell the Convention something about bees.

W. A. CARMACK.

Marengo, Ill., Jan. 7, 1884.

Nomenclature of Bee-Keeping.

MR. EDITOR:—In your "Nomenclature of Bee-Keeping," on pages 603 and 604, you say a "Bee-moth is a miller which preys upon the combs;" and Mr. W. F. Clarke says about the same, in his criticism. I always supposed it was the larvæ instead of the moth or miller that actually ate the combs. O. O. POPPLETON.

Williamstown, Iowa, Jan. 2, 1884.

[The point is well taken. Such criticisms are just what is wanted. Of course it was an oversight in writing.—ED.]

Experience with Syrian Bees.

Last spring found me with 10 colonies, two of which I divided into nuclei, for queen rearing; leaving 8, which I ran for comb honey. I received 425 pounds in one and two-pound sections, and increased to 31 colonies; all but 2 or 3 of which are in fine condition, and packed with sawdust on the summer stands. My best colony was a Syrian, which, with increase, gave over 100 pounds and increased to 5 good colonies. The first swarm gave 40 pounds, and then threw out a very large swarm, leaving behind them 46 queen-cells (45 of which I destroyed); and gave 12 lbs. of surplus. I find them as gentle as my Italians, but making a very different class of movements; requiring some knowledge of the race in order to manipulate them with the best results. I am much pleased with them, and shall stock my apiary principally with them. My report might have been much better, had I not sustained a great loss both of honey and patience, by delay of supplies ordered from a prominent dealer, it being two months from time of ordering until I received them. I wish to give my method of disposing of after-swarms. Instead of hiving them in the usual way, I shake them into 3 or 4 empty hives, and, of course, all will soon return to the parent colony, except the division where the queen happens to be; here I give them a frame of unsealed brood, and let them remain until the queen is laying, then I use her when needed. This is often easier than finding a virgin queen. A happy New Year to the JOURNAL and its Editor. W. C. STEDDOM.

Oregonia, O., Jan. 1, 1884.

[You will probably order earlier in future and save a rupture of patience, and increase your honey crop.—ED.]

Warm Cellars.

Allow me to ask Mr. Ira Barber, of De Kalb, N. Y., through the BEE JOURNAL, how he manages to keep his bees at such a high temperature as 65° to 90° through the winter?

MARTIN EMIGH.

Holbrook, Ont., Jan. 5, 1884.

A Critic Criticised.

In Mr. Clarke's letter (page 9) he asks: "Is 'pollen' always 'the farina of flowers'?" and suggests that the farina of rye or other meal may be pollen. The use of pollen as signifying *meal* is now obsolete, according to the best lexicographers; its use is now confined solely to the fecundating powder found on the anthers of flowers. If bees feed on pollen—say pollen; if on meal, say meal. Since my note appeared in the BEE JOURNAL, I have received several letters urging me to publish my vocabulary, and I will probably do so as soon as I have time to revise it. It will contain nearly 400 vocables, all relating strictly to bee-keeping. JOHN PHIN.

Cedar Brae, Paterson, N. J.

My Report for 1883.

I commenced the spring with 28 colonies in fair condition; increased them to 62 colonies by natural swarming, and harvested 3,100 pounds of honey (2,100 pounds extracted and 1,000 pounds in one and two-pound sections). The largest amount taken from any one hive was 330 pounds of extracted honey; the largest amount of comb honey was 84 pounds from one hive. I have sold 7 colonies at $6 each, and have sold about all of my honey at home at an average of 15 cents per pound. I packed 55 colonies in sawdust on the summer stands on Nov. 1, in fair condition, and they are doing well, notwithstanding the thermometer indicated 24° below zero on Jan. 5. I use the standard Langstroth 10-frame hive, and obtain increase by natural swarming. Give me the Italians and hybrids for general purposes, and the BEE JOURNAL as my guide. J. W. SEARS.

Harrodsburg, Ind., Jan. 9, 1884.

Prospects in California.

Who would or can keep bees in this age without one or more bee publications? My choice is the Weekly BEE JOURNAL. I have a copy of every number which has been published; and for nine years I have been its constant reader, and from it I have derived both pleasure and profit. Long may it continue on its useful mission. The rainfall here of this winter, up to date, has been about 5 inches. As far as I can ascertain, bees are in good condition, and the pulse of their keepers beats higher than it has for many years, at this season.

J. E. PLEASANTS.

Los Angeles, Cal., Jan. 1, 1884.

Home Market for Honey.

I commenced last spring with 28 colonies, and got 1,300 lbs. of honey, mostly extracted. It was all sold in my home market at 9 and 10 cts. per lb. for extracted, and 18 cts. per lb. for comb honey. I have 62 colonies in winter quarters; all are in the cellar except 5 double-walled hives, on the summer stands. Each have from 25 to 35 lbs. of good honey. My cellar is very dry, with temperature from 35° to 45°. They are very quiet, so far.

S. J. CHURCH.

Cedar Rapids, Iowa, Jan. 8, 1884.

Cold in Nebraska.

Even since Dec. 27, the thermometer has been below zero during the nights, and once it was 19° below. There is plenty of snow, and it is continually cloudy. WM. STOLLEY.

Grand Island, Neb., Jan. 8, 1884.

[In Chicago the thermometer has been as low as 27° below zero, during the weeks' blizzard.—ED.]

Pasturage for Bees Over-stocked.

I have kept bees for over 25 years, and have experienced its various ups and downs, but as a general thing more of the latter than the former, still I enjoy, as well as ever, to care for and study their industrious and wonderful habits. I have 50 colonies, apparently wintering well. Within a radius of 3 miles there are about 250 colonies. The past season has been a good one for honey, but not in this immediate vicinity, on account, in my opinion, of its being over-stocked, and of one side of our pasturage being cut off by the St. Lawrence river (1½ miles wide). My product was only about 800 pounds of comb honey from 30 colonies. ROBT. HENDERSON.

Ogdensburg, N. Y., Jan. 7, 1884.

Bees Buried Under the Snow.

Since the second day of the new year, we are wrapped in a severe snow storm. The mercury has been playing around zero all the time. To-day the snow fell to the depth of about 10 inches on a level, and at this writing (9 o'clock p. m.), it is coming down as fast as ever. Bees are buried in "clamp snow." WM. BOLLING.

Dunkirk, N. Y., Jan. 8, 1884.

No Honey from Buckwheat.

I started, last spring, with 21 colonies, all in fair condition; increased to 31; took 4,000 pounds of surplus honey, all extracted except 100 pounds. The first part of the honey season was good, but after the basswood bloom, my bees stored scarcely no surplus. There were acres of buckwheat within a radius of 2 miles, yet I extracted only 1½ pounds of buckwheat honey. Bees are now in good condition. I have wintered in a cellar for four successive winters without the loss of a single colony. I. J. Wheeler.

Monona, Iowa, Jan. 9, 1884.

Prefers the Cellar for Wintering.

We are having some very cold weather here this winter. The thermometer ranges from 20° to 25° below zero. I am wintering 15 colonies of Italian bees in the cellar, all in good condition. As yet, I think the cellar wintering preferable, as it took only from 5 to 8 lbs. of honey to a colony, last winter, to get through.

R. C. Cressy.

Battleboro, Vt.. Jan. 7. 1884.

Producing Dysentery.

To produce dysentery, feed the bees with honey that has been exposed in the cold from 10° to 20° below zero, when they cannot fly freely afterwards, and dysentery will follow every time; at least it has with me, pollen or no pollen. I think frozen honey will produce it. My cellar is kept from 45° to 50° all the time.

Mattison, Ills. A. Wicherts.

My Report for the Season.

I commenced the season with 23 colonies; increased to 41. It being a busy season with me, I lost 6 swarms that went to the woods. My yield is 600 pounds of extracted and 1,830 pounds of comb in two-pound sections. I sold my honey at 18 and 20 cents for comb, and 12½ cents for extracted. J. I. Lucas.

Stanton, Mich., Jan. 8, 1884.

Is Comb Foundation Valuable?

On page 671 of Vol. 19, Mr. Doolittle says the use of foundation for brood-chambers is an unnecessary expense, or words to that effect. From actual experience I beg leave to differ with him on that point. Although I have not been in the business as many years as Mr. D., I have given thorough experiments, and have proven it to be of untold value. I am inclined to believe that if a little foundation or wax guide is good, that more is better, whether it be in the brood-chamber or surplus boxes. One of my experiments, last summer, consisted of hiving 3 swarms of equal size and value at the same time on the following plan: No. 1 was placed in a hive without any foundation; No. 2 I gave starters 3 inches wide, and No. 3 was hived on full sheets of foundation. Now, for the results: At the close of the honey season I had taken 7 pounds of honey from No. 1; from No. 2 I had taken 60 pounds, and from No. 3 I received 168 pounds, which puts me on the list of those who would not do without foundation in the brood-chamber. This is not the only experiment I have tried, but many others that gave as good results. I use the Langstroth frame, and use three wires the long way of the frame, and the eggs never fail to hatch on the wires, and my combs are always straight. So, before any one discards the use of foundation for the brood-chamber, try it yourself, and see if I am not right.

Macomb, Ill. J. G. Norton.

Out-door Cellar for Wintering Bees.

In 1880 I had 75 colonies of bees, of which I was proud. In the spring of 1881 I had only one left, but I have again increased to 22, this summer. I have an outdoor cellar in which they did well last winter. Mr. Sargent, who has helped me along considerably, has 35 colonies in my cellar this winter. My neighbors all winter their bees out-doors, unprotected, and are careless about them.

Jacob C. Whiting.

Twin Lakes, Mich.

Bees Packed on the Summer Stands.

I have all my bees in the cellar; they are as quiet as they can be, after this cold weather, 30° below zero. We had hundreds of dead bees on the bottom boards; two days before the cold you could not see a single bee. I have them packed thus: I lay three sticks across the frames; then lay a cloth over them, put on the second story and fill it full of chaff. I have sweet clover growing all around. It will be in blossom next summer. I had about ½ acre of Alsike last season; that is a great honey plant, but it is no field crop. I hope there will be an early spring, as some of my colonies have only about 10 pounds of honey (all they gathered all summer, as they were weak in the spring). I suppose they used it to rear brood.

Hugh Williams.

Racine, Wis., Jan. 9, 1884.

Beginning with Frame Hives.

I commenced the spring of 1883 with 7 colonies of bees, mostly blacks, and some hybrids, in box hives. I transferred most of them to frame hives, and also transferred some for my neighbors, and they all have done well. I received 155 lbs. of honey from one of them, and they have 40 pounds left to winter on, but they never swarmed. I have kept bees for over 5 years, and like to work with them, and have never been run off by any bees I ever saw. I have never seen any Syrian or Cyprian bees in this part of the country. I never used a smoker until this season, and I found it a great help to me. I bought 5 colonies this fall, in box hives, which I will transfer in the spring, making 18 strong colonies, 3 weak ones and one nuclei (22 colonies), from 7, spring count; besides 200 pounds of extracted and 425 pounds of comb honey, which was all sold at home at an average of 12½ cts. per pound. I winter my bees on the summer stands, in the same way as Mr. Dadant, of Hamilton, Ill. They are all right so far; the weather has run below zero for a week, and was 31° below zero on Jan. 5, 1884. I have been reading the Bee Journal for a year, and lay the most of my success with my bees to it.

Henry Erbrodt.

La Harpe, Ills., Jan. 7, 1884.

Bees Banked up with Snow.

I came here on March 7, 1883, and brought 8 colonies of bees from Iowa County, Ind. Of course the bees were short of honey, on account of being moved. The spring was wet and cold, but fruit bloom gave the bees a start; clover was simply immense, but the honey from it was thin; there was not much linden honey, but the proceeds from the bees was $6 per colony, spring count, and they increased to 24 colonies. They are on the summer stands, and have plenty of honey and bees. They are now banked up with snow.

Wm. S. Buchanan.

Elizaville, Ind.

Premiums at the Iowa State Fair.

In reference to the Premium List presented by O. Clute, allow me as an Iowa bee-keeper to say that I think Cyprian and Syrian bees should have the same premiums as Italians. All races should have an equal chance for the same premium. Wm. Malone.

Oakley, Iowa, Dec. 29, 1883.

The Season's Work.

The past season was rather a poor one for bee-keepers; part of the time it was too wet, and the latter part of the summer and early fall were dry; and besides that we had a very hard frost on Sept. 10, which killed most of the fall flowers. Last fall I had 8 colonies of bees, in pretty good condition for winter, but I did not get them packed in time, so I lost all but one colony. I got no increase, but I had 80 pounds of honey from it, from June 8 to Sept. 10. On June 15 I purchased 6 three-frame nuclei, and put them into Langstroth hives, and gave them frames of comb that I saved from bees that died the winter previous. One of them swarmed on July 20; this one also swarmed twice afterward, on July 20 and Aug. 10; the last one "left for parts unknown" the next day after being hived. I returned this also several times, but on Sept. 4 it came out, and I did not see them until they were ready to leave. I think this rather late swarming for this section of country. I have a colony in a chaff Electic hive, which I think is the best chaff hive I have seen, or seen described. J. S. Barb.

Bristolville, O., Dec. 6, 1883.

Satisfactory Results.

In the spring of 1883 I had 11 colonies of bees; in the fall they had increased to 27 colonies. I obtained from them 1,600 lbs. of honey.

C. W. Johnson.

Norwood, Mich.. Jan. 8, 1884.

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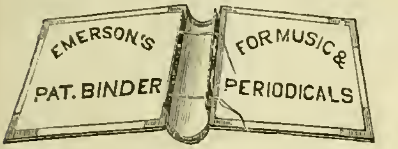

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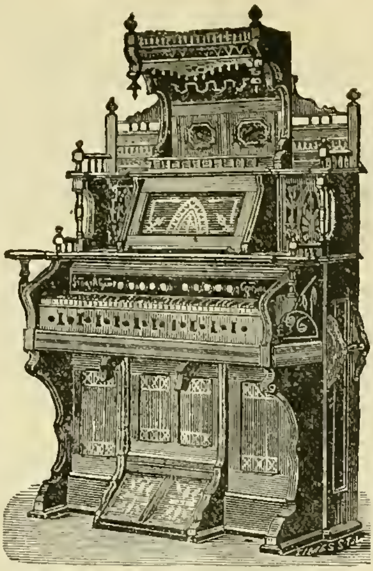

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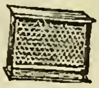

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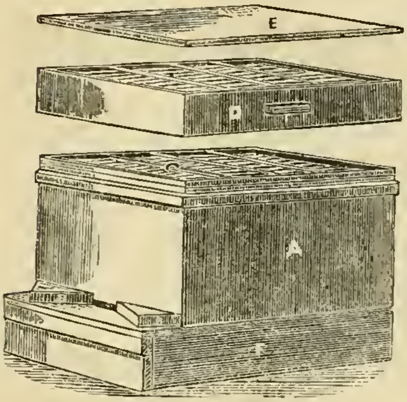

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Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

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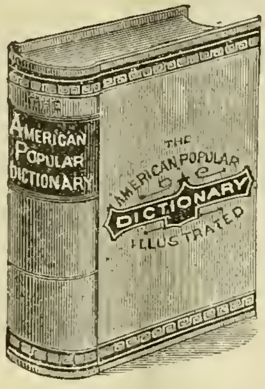
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Engravings are fine. Gotten up in the best style and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

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It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

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DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861.   Chicago, Ill., January 23, 1884.   VOL. XX. No. 4.

THE WEEKLY EDITION OF THE AMERICAN BEE JOURNAL

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EDITOR AND PROPRIETOR.

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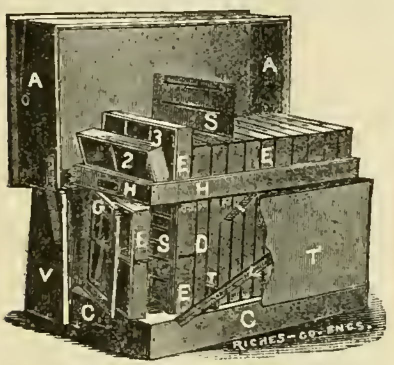

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Weekly Bee Journal,

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VOL. XX. CHICAGO, ILL., JANUARY 23, 1884. No. 4.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

☞ We have received a copy of the report of the Kansas State Board of Agriculture for the quarter ending Dec. 31, 1883. In it we find a Table showing the honey and wax product, and the number of colonies of bees in the State in 1882. The totals are as follows: Colonies of bees, 19,752. Honey product, 312,421 lbs. Wax, 4,475 pounds.

☞ We have a few photographs (cabinet size) just taken, of the Rev. L. L. Langstroth, which we can send to those desiring them for 50 cts. each, postage prepaid.

☞ Mr. W. F. Clarke has removed from Guelph to Speedside, Ontario, Canada. His correspondents will please take due notice.

☞ The *Apiculturist* for January is received; it contains a full-page likeness of Mr. Langstroth.

Ellwanger & Barry, of Rochester, N. Y., have sent us their Price List of American Seedling Roses for the season of 1883-4.

Price Lists for 1884.—The following are on our desk:

M. Richardson, Port Colborne, Ont., 16 pages—hives and apiarian supplies.

J. C. Mishler, Ligonier, Ind., 1 page—Italian bees and queens.

J. T. Wilson, Mortonsville, Ky., 1 page—Italian queens.

A. H. Newman, Chicago, Ills., 36 pages—bee-keepers' supplies.

I. R. Good, Tullahoma, Tenn., 1 page—Syrian and Italian bees and queens.

Jas. H. French, Elizabethtown, Ky., 1 page—Combination bee hive.

Toronto Convention Report.

It will be remembered that we sent a representative to the Toronto Convention, and that a Report of the Convention, written by Mr. W. F. Clarke, was published in the Weekly BEE JOURNAL for Sept. 26, the very next week after the Convention, and in the following number for Oct. 3, we published the Reports of Vice-Presidents, President's address, and the essay of Mr. Clarke. Now, in the light of these facts, it is refreshing to read the following letter:

By the way, Mr. Newman, why have you never given us a full report of the Toronto Convention? A motion was offered by Dr. Brown, and supported by Judge Andrews, of Texas, to have the minutes published in pamphlet form and distributed to the members; the motion carried, but the report does not come, for some reason or other. From hints received at Flint, there is a nigger in the fence somewhere.

WM. MORHOUS.

Dearborn, Mich., Jan. 5, 1884.

Of course the resolution to have "the minutes published in pamphlet form" has nothing to do with us, or the BEE JOURNAL. Why it has not been done, we know not. Perhaps the Secretary can explain it satisfactorily to our correspondent.

The mystery under cover of "hints received at Flint," is rather interesting. If any one has anything to say, it is more dignified and honest to speak it right out, than to hint and insinuate about "an African in the wood pile." Will you please speak out, Mr. Morhous—

"Speaking may relieve you!"

Who hinted? To whom did the hints refer? What were they hinting about?

☞ The pamphlet on "Wintering Bees," containing the "Prize Essays" on that subject read at the Centennial Bee-Keepers' Association, is now "out of print." The edition is exhausted, and it will not be reprinted.

The Old Virginian and Glucose.

Mr. E. E. Jordan, of White Sulphur Springs, Va., has sent us the following with this introduction: "I have just clipped this from one of our best and most popular papers, and hope you will think it worth a place in the BEE JOURNAL:"

THE OLD VIRGINIAN.—And with all this material progress let us put it on record that the Virginian is still the old Virginian; and let us be thankful for that. He, with his solid notions of honor, truth, piety, purity, and hospitality, is a good anchor to the Nation. This old Virginian, under whose solid mahogony I have had my legs, is building a barn. Every timber of this barn I have had to approve and praise for its solidity and permanence. His head is blossoming near the seventies, but he stumps and thumps every thing with his big oak stick to see that it is "solid! solid! solid! sah!" He is building a stone wall about his thousands of mountain acres, and, although he well knows he will never live to see it completed, he lays the foundation deep in the earth—solid! solid! solid! And his character, as well as those of his neighbors, seems to be quite as substatial. At breakfast one morning a bottle of honey, so called, was brought upon the table to be spread upon the crisp and smoking corn cakes. Well, this "honey" proved to be glucose. This glucose had been poured in upon a "honey-comb" which some Yankee had made by machinery. The good and gray old man had just finished saying grace. But he got up. He struck his fist in the air, and I tell you he fairly turned the atmosphere blue. "In France, sah, that grocer's store would be shut up, confiscated in ten minutes, sah. He would be tried for adultery, sah. It means that you shall not adulterate sugar, or tea, or coffee, or honey, or any of God's gifts to man, sah! Honey! Honey! *That's not the work of bees*, sah. Its glucose, *sticky, stinking glucose*, sah!"

The above is copied from the Winchester, Va., *Times*, and shows the growth of popular indignation at the nefarious work of adulteratiors. It also shows how that "scientific pleasantry" (lie) of Prof. Wiley, is deceiving conscientious men in every portion of the country.

That Glucose Fraud, Again.

Mr. Henry Jones has sent us the Detroit *Free Press* of Jan. 14, with the following paragraph marked:

WASHINGTON, Jan. 12.—The National Academy of Sciences, through President O. C. Marsh, to-day made a report on glucose to the Commissioner of Internal Revenue. After stating what starch sugar is, how manufactured, and chiefly used, the report says: The starch sugar industry in the United States gives employment to 29 factories, having an estimated capital of $5,000,000, consuming 40,000 bushels of corn per day, and producing grape sugar and glucose of the annual value of nearly $10,000,000. In Germany in 1881-82 there were 39 factories of this sort, consuming 70,000 tons of starch, producing 40,000 tons of starch sugar.

A thorough investigation of the whole subject was made by members of the academy, and as a result the following facts appear: That the manufacture of sugar from starch is a long-established industry, scientifically valuable and commercially important; that the processes it employs at the present time are unobjectionable in character, and leave the product uncontaminated; that starch sugar thus made and sent into commerce, is exceptional in purity and uniformity of composition, and contains no injurious substance, and that, though having at best only about two-thirds of the sweetening power of cane sugar, yet starch sugar is in no way inferior to cane sugar in regard to healthfulness, there being no evidence before the committee that maize starch sugar, either in its normal condition or fermented, has any deleterious effect upon the system, even when taken in large quantities.

We are well aware that glucose *can* be made without leaving sulphuric acid and other poisons in it, but it is done only in the laboratories of chemists, where absolutely pure materials are used, and the greatest of care exercised in its manufacture. But when made in quantities in the glucose factories, of materials which would have been rejected by chemists, glucose *is* just what we find it in the adulterated articles of commerce. The glucose in common use and the glucose of the laboratory are very far from being identical, in so far as purity is concerned.

To use the samples made in the laboratory, to aid in the sale and use of the impure glucose of the factories is but adding another fraud to the list! When made of pure materials, and with great care, it cannot be profitably used for the purposes of adulteration, and if not so used, it is of no value.

Analyses of glucose and glucose syrup have been made by Prof. Charles R. Fletcher, lecturer of chemistry in Boston Universty and State Assayer of Massachusetts; by Prof. R. C. Kedzie, of the Agricultural College of Michigan, and more recently by Prof. Geo. A. Mariner and Dr. T. D. Williams, of Chicago, as well as by hundreds of other highly competent and credible analysis throughout the country.

Prof. Fletcher, in a letter to Mr. G. T. Angell, the distinguished humanitarian and reformer, of Boston, says: "I have recently made three analyses of glucose and two of glucose syrup, and have found *quantities* of the free sulphuric acid *in every* case."

Prof. Mariner, in a letter to the same gentleman, says: "I have examined several syrups made essentially and entirely of glucose, and found in them chlorides of tin, calcium, iron and magnesia, and in quantities which made very poisonous."

A family by the name of Doty, living at Hudson, Mich., recently purchased some syrup of a grocer in that village. The members of the family ate freely of the syrup, and were all made very sick by its use. They became alarmed and sent a can of the syrup to the Michigan Agricultural College for analysis, supposing it to contain poison. The result of the analysis of this syrup induced Prof. Kedzie, of the University, to examine a number of table syrups purchased promiscuously from the grocery shops, in all of which he found poison.

Dr. Williams has made a careful analysis for use of a number of samples of glucose syrup and of sugars adulterated with glucose, in every case finding free sulphuric acid.

The presence of all the impurities found by the chemists whom we have quoted are readily accounted for. If iron pipes are used for conveying the steam for heating the contents of the vat, the sulphuric acid will attack and dissolve some of the iron, and thus sulphate of iron (copperas) will appear. If too little chalk is used free sulphuric acid will remain in the syrup. The chalk being carbonate of lime, its use will explain why lime is sometimes found in the syrup in large quantities.

The extent to which this spurious sweet—glucose—enters into the preparation and manufacture of articles of food, is quite alarming, and demands stringent laws against its encroachments upon the health of the general public.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 21, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no particular change to note in demand or price of extracted honey. Demand seems gradually improving, but the market being well supplied, and almost daily arrivals, keeps prices down. It brings 7@10c. The market of comb honey is as last reported. Choice in small sections brings 16@20c. from store.

In my last market report you make me say: "A choice article of comb honey in ½ lb. sections brings," etc. I wish to have it stated that I have sold a good deal of comb honey in 1 and 2 lb. sections during this winter, and that I had not a single call for ½ lb. sections. No doubt I should have sold them if I had some, but I am certain that they would have brought no better price than 1 lb. sections, nor would they have sold faster. I doubt whether they would have sold as well. I have, therefore, no particular use for ½ lb. sections of comb honey. I do not object to them, if the honey is choice; this is the best I can say of them. One time this winter we had 600 barrels or more of extracted honey on hand. We have now more than 400 barrels on hand yet. Margins and demand have, so far, been very unsatisfactory. Reason: "Slow business among manufacturers." But I have not been lazy, working up uses for honey, and if I do not report a very large demand for extracted honey in the very near future, then I have made a mistake.

BEESWAX—Scarce; brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@22c. Dark and second quality, 14@15c.; extracted white clover in kegs and barrels, 9@½10c.; dark, 8@9c.

BEESWAX—Prime yellow, 27@29 c.

H.K. & F.B. THURBER & Co.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—The extreme cold weather of the past week has put a check on the movements of honey, both in and out, and some slight concessions made in prices. Extra choice, 1 and 2 lb. sections, 17@18c; dark and irregular, 15@16c. Sales for the week about 2,000 lbs; receipts 3,000. Extracted slow; sales about 2,500 lbs., at 8@8½c; receipts light.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Fancy comb scarce, and prices for the same are firm, but offerings of other descriptions receive little or no attention. White to extra white comb, 15@20c; dark to good, 9@11c; extracted, choice to extra white, 6@7½c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Comb, 13@18c.; strained and extracted, 7@8c.

BEESWAX—Firmer, at 30@31c.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.

BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Our market is rather dull, and supply more than exceeds the demand; would not advise shipments to this market. 2 lb. comb, 16@18c.; 1 lb. comb, 18@20c.; extracted, 8@10c.

BEESWAX—32@35c.

BLAKE & RIPLEY, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

Nebraska State Convention.

The Nebraska State Bee-Keepers' Association met at Lincoln, Neb., Jan. 9, 1884, and was called to order by President Von Dorn at 2:30 p. m.; upon roll call more old members were found present than ever before during the history of the association.

The minutes of the last annual meeting were read and approved. The Treasurer's report was read and referred to a committee on finance, consisting of Messrs. Hawley, Rose, and Muir; the committee reported favorably, and it was approved. The President's address was then made special order of business for 10 a. m., Jan. 10.

The election of officers was made a special order of business for 2:30 p. m., Jan. 10, in order that all might be present.

It was stated that foul brood had made its appearance in our State, and a resolution was unanimously adopted to appoint a committee to thoroughly investigate the statement and report to the association with such resolutions and recommendations as to them may seem proper. Messrs. Hawley, Muir and Culbertson were appointed as such committee.

No other business being especially in order, the association discussed the following: "What size of hive is the best to extract from?"

Prof. H. Culbertson, of the State Agricultural College, Lincoln, took the ground that an 8-frame Langstroth was too small, even if two-story, but preferred a large one-story hive, and was of the opinion that where more than one-story was used, that, during the honey flow, entrances in the upper story was beneficial, from the fact that bees always used any crack or opening that existed in the upper story.

G. M. Hawley, of Lincoln, was of the opinion that by using a perforated honey board 8-frame Langstroth hives could be tiered up and extracted from, with the best results. The board preventing the combs, in different stories, from being bridged together.

R. V. Muir, of Brownville, uses 10-frame Langstroths and thinks them as good as any; tiers up by raising the full top and putting an empty one in between. Out of 30 colonies, only one queen went up to the second story; he thinks it an easy matter to put in empty combs and keep her down.

The Secretary: At present I run for extracted honey, and use an 8-frame Langstroth, but believe that a large one-story hive is the best for extracted honey, from the fact that I believe that the bees will store their load in the empty cell that is the most convenient, and such room can be furnished convenient to the entrance in a large hive. I would not recommend any one to make such a large hive, from the fact that the market is liable to change, and in that case we might want to change from extracted to comb honey, and I do not think a large one-story hive as suitable for comb honey as a small two-story one. I believe in having a hive that is the most suitable for either kind of honey, and I am of the opinion that the 8-frame Langstroth comes nearest to filling the bill. I use a perforated honey board to keep from the bridging, Mr. Hawley speaks of, but do not think a queen-excluder can be made to work satisfactorily in all cases. During the past two years, if I had used an excluder to keep the queen from the second-story, she would have been kept from laying almost entirely, for want of space, because the lower story was kept so full that the queen had scarcely any place to lay, unless she went above. Of course I thought the bees moved the honey above, in the night, but then the lower story was filled again before noon, and the consequence was that I found nearly as many queens above as below. The greatest objection to two-story extracting hives is lifting a heavy second story off and on, to get to ripe honey in the lower story. When extracting, I always leave some of the oldest honey for winter.

E. A. Butterfield, of York, made seven fly holes in the second story, and only four of them were used.

The President and F. E. Colwell liked fly holes. Mr. Colwell's bees, in a honey flow, flew directly in the hole.

W. F. Tucker's bees did the same.

Mr. Hunt's bees used the fly hole when they wanted to get out and sting him.

N. Pursen, of Florence: The instinct of bees we believe naturally inclines them to use but one entrance, and I think that is sufficient. I think that young bees receive the honey from the field bees and store it in the cell. In the latter part of the day, I have seen brood covered with honey, and in the morning uncovered; I think a bee two days old will carry honey, and do not change much in appearance until they go to the field.

The President had seen bees come from the field and go directly and stick their head in a cell apparently unloading. It was a very easy matter to watch a bee by dusting it with flour.

C. B. Darrow, of Geneva, inquired if it would not be advisable to use the lower story entirely for extracting, and keep the queen above, as the indications are that the bees store the most readily below.

Mr. Pursen said that the instinct of the bee is against Mr. Darrow's question. He thought they stored over the brood-nest to encourage heat for curing the honey. In 1882 his honey was not good for table use for four or five days after extracting, but in 1883 it was good at once as soon as extracted. Bees enlarge the brood nest equally in all directions, and put the pollen in the lower story.

W. F. Tucker inquired if we could not cure honey as well after extracting as before.

L. B. Boggs, of Tilly, had hived a strong swarm on foundation, and in ten days it was filled; he took out two uncapped combs of very green honey, and in ten days it was ripe and good.

The Secretary being called for, believed that in the hive was the proper place to cure honey, from the fact that it was in bodies of very small quantities, also the heat of the bees was present, and the dampness in the honey had to rise but a short distance to come to the surface and be carried off and evaporated. Honey was an absorbent of dampness, if exposed to damp air. He had noticed honey, exposed to damp air in wet weather become thin and watery on top, while deeper down in the honey it was thick. Honey put in damp cellars should always be put in air-tight vessels as it will gather dampness and sour; and then, of course, the bee-keeper was to blame, and really I do not know but what he is, for not educating his customers better, with labels, etc. I use oak barrels, which I cannot keep from leaking even with paraffine, and when I returned from Chicago, last fall, it was uncommonly wet and rainy, and the floor of my honey room being partly covered with honey, which leaked from the barrels, it had absorbed the dampness until it was almost as thin as water, and made an excellent skating rink. My honey is all from heart's-ease.

Mr. Hunt uses basswood barrels, and a few years ago extracted basswood honey one day and shipped the next, and the barrels were not uncorked for three months, when the honey was found to be all right.

President Von Dorn then announced that out of 30 reports gathered during fall, showing 918 in the spring and 1,432 in the fall, 49,996 pounds of honey was taken.

Adjourned until 7 p. m.

The meeting was called to order, and an address of welcome delivered by H. W. Hardy, of Lincoln, and replied to by T. L. Whitbeck, of Wahoo. These were excellent, but time and space compel us to leave them out. Next in order was the reading of an essay written by T. L. Von Dorn, on the old, old subject of wintering, dysentery, etc., and the entire evening was taken up in discussing it—each one having his own style and theory, about as is usual when discussing any subject.

Jan. 10.—Met at 10 a. m., and the President addressed the Convention as follows:

At the close of the 5th year of our Association, I congratulate you on the advancement we have made, both in point of numbers and ability. From the small beginning made at Omaha, our numbers have steadily increased until our membership is scattered over quite an extent of the State, and embraces some of the very best of practical and successful apiarists. The proceedings of our sessions have been of great interest to those bee-keepers who have been unable to attend them, as well as to those who were present, and I would recommend that a more full and careful report be furnished for publication.

In accordance with my own views, and with the concurrence of the other members of the executive committee, I have assumed the responsibility of calling the annual meeting on the second Wednesday instead of the second Thursday, as provided in the constitution governing us. The chief reason for such action being the increased time, it would allow members to return to their homes, liable as we are to delaying storms at this time of the year. I hope the action will meet with your approval, and that the change will be made permanent by suitable action of this body.

The exhibition at the State Fair was by far the best ever had, both in bees and honey; and it now seems desirable that provision be made for increased space for a proper display of our products. Objection was made last year to allowing us the space already granted, and as, so far as I know, there is no other suitable place upon the grounds, it seems probable that unless additional room is made, we will be without a location in which to make an exhibit. I would advise that the matter be given careful consideration. In this connection, I would suggest that our exhibition be made of a more instructive character, and that, to that end, there be a daily manipulation of one or more colonies, demonstrating practical apiculture. I would also suggest a consideration of the rules to govern such exhibits.

The exhibitors and bee-keepers at large are under many obligations to the Hon. B. E. B. Kennedy, Superintendent of Class 7, Bees and Honey, for the very able and courteous manner in which he supervised our exhibit. His zeal in our chosen pursuit, his courtesy and kindness to all, and his earnest effort in our behalf, merit our warmest thanks. The various officials of the State Fair have also shown their usual courtesy, leaving nothing to be desired, except a suitable place to exhibit.

Next to the production, one of the most important subjects is the marketing of honey, and I am convinced that but few understand it well. I would suggest that the subject be made a special order early in our session.

Our Association was represented at the Northwestern Bee-Keepers' annual meeting, at Chicago, Ill., by our Secretary and President, and quite full notes were taken of the proceedings, which will be valuable for reference in our debates. I would suggest that two of our number be delegated to attend these annual meetings, that we may have the full benefit to be derived therefrom. The railroads of our State, always ready to advance the general good, again laid us under obligations, the B. & M. furnishing transportation for your representative upon this occasion.

I would call your attention to the fact that we are liable, unless great care is taken, to have foul brood introduced into our State, which would be a deplorable calamity. As we are every year buying more or less largely of bees and queens from points east of here, and as it was openly stated at the Chicago Convention, mentioned above, that unscrupulous parties were disposing of bees known to be infected. I feel that our Association should take prompt action in the premises, and mature, if possible, some plan by which, if introduced, it may be at once stamped out, and its further spread prevented.

This address closes the third year during which I have been honored by being your presiding officer. I would suggest the propriety of electing another, as there may be a commendable desire in others for the honors, and in those who could add new vigor to our Association. We should not let any felling actuate us, but that of a generous rivalry in advancing our mutual good. While fully appreciating your good wishes, and bearing most cheerful testimony to the many kindnesses shown me, I am sincere in the opinion that a change may be of advantage to us all.

T. L. VONDORN.

The above address was referred to a committee consisting of J. R. Ballard, Chas. R. Thompson and Jas. W. Bishop, who, after a short absense, made the following report:

"In regard to the President assuming the responsibility of calling the annual meeting one day earlier than is fixed by the constitution, we heartily approve of, and recommend that the second Wednesday in January be permanently fixed as the time for the annual meeting, instead of the second Thursday. We would further recommend that a committee be appointed to confer with the State Board of Agriculture, and do all in their power to secure ample room for the exhibition of our apiarian products. Your committee would still further approve of our President's suggestion that a delegation of two or more of our members be elected to attend the Northwestern Bee-Keepers' Association at Chicago during the fall of 1884."

The report was adopted and the committee discharged.

The committee on Treasurer's and Secretary's report, said they had examined them and found them correct.

The report adopted and bill of $11.50 for stationery ordered paid.

The hour having arrived for the election of officers, the following were unanimously elected: T. L. Von Dorn President; S. L. Thomas Vice-President; R. V. Muir Treasurer, and M. L. Trester Secretary.

The President and Secretary were then elected as delegates to the Northwestern Bee-Keepers' Society.

The foul brood question was then taken up and discussed at great length; it being ascertained that the disease existed at two points in the State—one of them having been certainly brought from Illinois, and the other appeared in bees brought from Illinois, but it is not known whether the disease was brought or not in the last case, but from the circumstances surrounding them, it is reasonable to believe that they were diseased when received.

Prof. Culbertson then offered the following remarks on fungus growth, which he stated was a vegetable growth, consisting of spores or particles so small and light that they would float in the air, and that each kind of fungus growth had its own food to live and prey upon, and did no harm in any other place. For instance, foul brood was a fungus growth, and lived upon the larvæ of bees, and from what he had read, did not affect the old bees or the eggs. Diphtheria was the result of fungus growth, and found the place for it to take root and grow in the throat and vicinity of the human family, the condition of childrens' throats being more adapted to its taking root and growing than in the throats of adults. The smut of corn is a fungus growth, also the rust on wheat; that Prof. Burrill had shown that the pear blight was a fungus growth, that we were indebted to the German scientists for these facts, as there was but few magnifying glasses in the United States powerful enough to be used satifactorily in their researches; that one spore or seed of fungus growth, when coming in contact with its natural food, would in a short time produce millions and millions of spores or seeds, which would, in many cases, float in all directions, making destruction in its course.

The committee on foul brood made their report, which was referred back, and the committee directed to consult with the Governor and Attorney-General of the State, and recommend such action as to them seems proper.

The Committee elected to confer with the State Board of Agriculture were T. L. Von Dorn, G. M. Hawley, and E. Shugart, Beatrice.

Bee pasturage being brought up, Mr. Ballard spoke very highly of dandelion and alsike clover, stating that he had seen 4 or 5 bees on one blossom of dandelion, and recommends alsike clover, as it will take root on the prairie.

G. M. Cooper, Beatrice, gave it as his opinion that white clover did not secrete any honey last spring, on account of the cool weather.

P. M. Aldrich said that his bees worked on rape long after frost. No one present had ever seen rape fail.

Mr. Colwell sowed the roadside twice last year, and had a continuous bloom all summer and late in the fall; puts about one peck to the acre on the roadside.

Mr. Hawley sows about 6 lbs. of rape seed per acre.

Mr. Colwell's bees have a great feast on box elder sap, early in spring.

Mr. Hawley had sown rape several times, but the bees only gathered fast enough to build up; he can tell when his bees are gathering rape honey by the odor.

C. C. Turney, Ceresco, had seen bees work very extensively on the blackberry, both blossom and fruit, and also on parsely.

Wm. Sutton, Elk Creek, saw his bees on raspberry and alsike clover; they did a great deal to stimulate his bees, although the quantity is limited in his locality; they bloom about the middle of June.

"Races of bees" being taken up, several speakers thought that hybrids had many qualities superior to Italians, inasmuch as they were excellent comb builders, and easy to induce into the sections; some claiming that the Italians came out too early in the spring, and thereby dwindled.

Mr. Hawley had over 100 colonies of Italians and 2 or 3 Cyprians. Cyprians were so cross that he tried to Italianize them, but they would not receive the queen, and persecuted her, in one case, until she flew away. He was not at all pleased with them.

Mr. Sutton said his Italians had worked on red clover a great deal during the last season.

Mr. Butterfield had watched his bees very closely, and found that last fall the red clover revived after frost, and the Italian bees stored surplus honey from it, which he believed was the finest honey he ever tasted.

Mr. Darrow had 20 acres of red clover in 1883, and bees would not touch it; while in 1882, they left early-sown buckwheat at 9 a. m., and went to the clover; the honey they gathered from it was excellent.

Mr.—— said he had 13 acres of red and white clover, which he used as a pasture, and his children, while going for the cows, would often count the bees on the clover, one counting white clover workers, and the other red clover workers, coming out with various results. He does not think they ever mix the load with two kinds of honey.

G. M. Cooper, Beatrice, and others, came to the conclusion from the discussions on bee pasturage, that it was only necessary to plant or sow in Nebraska for the purpose of stimulation or increase.

Mr. Muir was of the opinion that the disposition of a colony of bees depended, to a very great extent, on its strength, strong colonies generally being more cross than weak ones.

At this stage of the meeting, the foul brood question was again sprung, and a motion made to appoint Prof. Culbertson as State Inspector of that disease. Also another motion was carried, for the President to appoint a committee of three to consult with the regents of the State University, and urge upon them the importance to the State of their directing Prof. Culbertson to carry out the wishes of our Association. The committee consisted of Messrs. Hawley, Trester and Bishop.

An expression was then taken by the Association, showing a preference for Lincoln as the place for holding the next annual meeting.

Mr. Muir then asked the question: "Will it pay to keep 80 acres of land on which there are about 1,600 basswood trees, 9 and 10 inches in diameter, exclusively for a bee pasture?"

After quite a general expression of opinion, the Association seemed to come to the conclusion that the owner of such a piece of land, could figure with considerable certainty on $1,000 worth of honey from it annually.

The committee on resolutions, consisting of N. Pursen, P. C. Backus, Omaha, and C. S. Avery, Omaha, reported as follows:

Resolved, That the thanks of this Association are hereby tendered to the bee-keepers and citizens of Lincoln, for kind and generous treatment received from them.

Resolved, That we tender a vote of thanks to the U. P., and B. & M. railroads, for reduced rates of transportation furnished to members of this Association while attending this meeting.

Resolved, That we tender Mr. B. E. B. Kennedy a vote of thanks for his aid in the apiarian department at the last State fair, also to the Y. M. C. A. of Lincoln, for the use of room for this meeting.

A vote of thanks was also tendered the Secretary, for work done in the interests of the Association.

M. L. TRESTER, *Sec.*

For the American Bee Journal.

Buckwheat for Honey.

ALLEN PRINGLE.

In sowing buckwheat for honey, I have found (unusual as it may appear) that the best time is about the first of August; that is, when there is but the one seeding during the season. Of course if you have plenty of land to devote to buckwheat, and sow several times during the summer, you can commence in May and sow every two weeks until the first of August. But my experience is that bees will not gather from buckwheat early in the season, even when it is yielding honey freely, unless they cannot get it anywhere else. Buckwheat sown the first of August will bloom during the first half of the month of September, when honey from other sources is scarce, and the bees will then gather from it freely. This, of course, pre-supposes the absence of frost during that time. Last fall my bees had nicely commenced the first week in September to work on the first-of-August-sown buckwheat, when the frost came and promptly stopped the industrious ingathering. But that frost last September was exceptionally early in this latitude. The fall before (in 1882) there was no frost during September, as is usually the case here, and the bees reaped an abundant fall harvest.

To make the most of buckwheat for honey, the best policy the bee-keeper can pursue, who has land to spare for two seedings during the season, is this: Sow the first lot about two weeks previous to the ordinary time your neighbors sow for a crop; and then sow again about the first of August as already stated. You will then have a pretty continuous bloom (frosts excepted) for over two months; for the farmers in almost any given locality vary from ten to twenty days in their time of sowing buckwheat for a crop—some sowing as early as the first week in June, while others sow the last of June and the first of July. By supplying your neighbors with the seed *gratis*, they will generally sow at the time you may direct—that is, within the bounds of a reasonable seeding time, so as to raise a crop.

Thus you can give seed to a neighbor on one side of you instructing him to sow it a certain time, say two weeks after you have sowed your own first lot. Then to another you can give seed enjoining him to sow it, say a week or ten days after the first. Then if you can get somebody else to sow a week after that, or even four or five days, give him the seed and you will lose nothing by it. Finally, you can draw up with your own last sowing about the first of August, and then your buckwheat "bow" will not only have "two strings," but about half a dozen.

A few years ago I hit upon a plan by means of which I can have a given field of buckwheat blooming continuously for three or four weeks. I fancy I now see some *old fogies* and *young wise-acres* smiling incredulously at this. Well, it is a fact nevertheless; and as I have never thought of taking out a patent on the *secret*, I will tell all and sundry how the thing is done. I do not say it can be done on all kinds of soil, but it certainly can on light soils, sandy or gravelly.

After first plowing and harrowing the field to be sown, in order to get the land well pulverized, I plow again in deep and shallow furrows alternately. The plow must be so adjusted that it will be thrown well "to land," so that the earth turned up from every furrow will fall just short of the next one to it, and *not fall into it*. Having got your plow so arranged that it will run just far enough "to land" to accomplish this without any extra exertion in holding it, you can plow every alternate furrow shallow by properly bearing upon the handles. This will leave the land in alternate deep and shallow furrows with cones, more or less regular, between them. Now sow your land thus prepared (lengthwise of the furrows for ease in walking), and harrow thoroughly *across* the furrows, and your work is done.

This process leaves the grain in the soil at different depths from a half inch to seven or eight inches, that near the surface coming up first and the rest following at different times. You will thus have a continuous and protracted bloom for two or three weeks or more. On heavy clay the plan would probably not work; I have not tried it on such, but on light soils it is an almost invariable success as I have proved.

Selby, Ont.

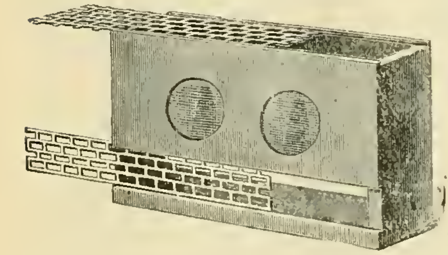
For the American Bee Journal.

Can Fertilization and Swarming be Controlled?

HENRY ALLEY.

We have many and perhaps nearly all the useful and valuable implements for managing the apiary, that the bee-keeper demands. A device for controlling fertilization and swarming has been about the only article not supplied. We now have that, and I will give a brief description of one that I have been at work upon for a long time.

The first year I began bee-keeping, I saw the need of some kind of an arrangement for destroying drones. I then devised one, the principle features of which I have used during my experience with bees. It was simply a box, 6 or 8 inches square, with a piece of tin one inch wide, having a perfectly straight edge, nailed across the top of one end. A square of glass was then used to cover the box, and to let the light in, as the drones would not enter the trap unless the light attracted them there. The glass was set within 3-16 of an inch of the tin, or just room enough was left between the edges of the glass and tin for a worker bee to pass, while the drones could not. A wire-cloth tube was used to connect the box and hive, for the bees and drones to pass through from the brood nest. When the drones and queen had once entered the trap, they could not return or escape, and hence were entrapped. Now, while this contrivance answered every purpose for my own use, I never thought I could so describe it that one could be made without a model to work from, neither could I say that the traps, as I have made and used them, were as perfect as they should be; in fact, I could not perfect them for want of proper material. But since the introduction of perforated zinc, I have completed the apparatus, and can now pronounce it a success.



I will give a few of its most valuable features: It is a drone-excluder, drone and queen trap combined. It is merely a box 6 inches deep, 10 inches long, and 2½ inches wide. (They can be made much larger if desirable). The drone-trap proper is about 4 inches deep. The bees enter and leave the hive through the bottom slide, which is of perforated zinc (shown in the cut partially drawn out). The apartment in which the drones and queens are entrapped, is above this. The drones, when they attempt to fly, cannot pass through the zinc, and are compelled to go up through the wire-tubes into the trap above, while the workers pass out freely through the perforations. Now, if it is intended to destroy the drones, they can remain in the trap, or, if to be preserved, but not permitted to fly for 2 or 3 days, towards night the slides can be drawn, when they will take an airing and enter the hive again.

By the use of these traps, queens can be mated with the drones from any colony in the yard, as no drones can take wing from any hive where the trap is placed.

But the most important feature about the trap is in connection with swarming. It will be found by a brief trial that swarming is completely within the control of the bee-master. When a colony has swarmed, and while the bees are in the air, the queen will be found in the trap, which can be placed near the bees on the ground, or a bench, or near the hive they are to occupy. The bees, if they have settled, discovering their queenless condition, commence to leave the cluster in search of her. They soon find her in the trap and at once settle there. Before all the bees have clustered on the trap, the top slide should be opened to release the queen, when the bees will enter their new home, and hiving them is completed. The trap then can be placed in front of the new hive, and the swarm cannot decamp to the woods, as is the case sometimes.

There is another advantage in useing a trap: The bee-keeper is not obliged to run and hive his bees the moment the swarm has come off, as there is not the least danger of their going away without the queen; neither is there any danger of his bees swarming while he is away from home—gone to church, for instance, or away for any purpose. Then again, not every bee-keeper cares to climb from 10 to 30 feet into a tree for a swarm of bees, especially if the thermometer indicates 90° or 100° in the shade.

Such things will be known only as in the past, and will be classed with the old way of killing bees, to secure their honey. With the use of the trap, the work of managing and caring for the apiary will be greatly lessened, and the profits therefrom much larger. A queen-and-drone trap should be classed with foundation machines, honey extractor and movable frames, in point of utility and worth.

Since the above was written, I have read with some interest Mr. Heddon's description of his trap. Mine, it will be seen, is unlike his, in all respects.

Wenham, Mass.

For the American Bee Journal.

Is Dampness the Cause of Diarrhœa?

O. O. POPPLETON.

In an article on out-door wintering, I once made the statement: "Show me a practical method of keeping the entire inside of my hives perfectly free from dampness, and I have no further fears of unsuccessful wintering." Of course, holding that opinion, which time and a farther comparison of the experiences of others has only served to strengthen, I cannot help being very much interested in trying to learn what are the causes of dampness in hives, and how to prevent it.

I have had very little experience with anything except out-door wintering, but so far as that is concerned, have no doubt but dampness is the cause of disease, instead of disease being the cause of dampness. Reasons for this opinion are: that I frequently find hives in the early spring that are quite damp inside, chaff, cushions, etc., as well as the refuse or excreta that is always found on the bottom-board at that season of the year, such hives almost invariably containing bees that are more or less diseased, but very frequently not having any more dead bees on the bottom-board than do those hives in which the bees have wintered in perfect health. Of course, in these cases, it is not at all probable the dampness could have been caused by the few dead bees that were present.

Again, bees sometimes die from starvation; in which case, so far as my observation goes, both the hives and their contents, including the bees themselves, remain as bright, clean and dry as it is possible for hives and bees to be; thus showing conclusively that bees, even in large numbers, do not always cause dampness.

There are a number of well authenticated instances where bees have wintered in perfect health, in very damp cellars, notably the one mentioned by Mr. Balch on page 6 of the Bee Journal. Again, several instances are reported where bees have wintered perfectly in cellars having spring water running through them, in which cases the air was probably quite moist all the time. Such facts as these have caused some writers to jump to the conclusion that dampness in no case causes disease.

I have had occasion a number of times during the past few years to test the temperature of water from drive wells; the water from these kind of wells being probably nearer like spring water than from any other kind of wells. I found the temperature of water very constant during the entire year, usually being about 1° warmer in January than in June, and in no instance did I find it lower than 45° or higher than 48°. Again, I now have a bored well, curbed with 12-inch patent stone curbing. The water in this well having so little exposure to the outside air, remains at about the temperature as was that from drive wells (47° at present). We have just been having a week of extreme cold weather, the thermometer not being above 10° below zero any morning of the week, and below 30° three of those mornings; and yet, frost has penetrated only about 2 feet on the inside of the stone curbing, and below that the entire inner surfuace of the stone curbing is kept free from frost by the warmth of the water below. Now, is not this exactly what a stream of running spring water through a cellar does, viz.: keeps the air in the cellar at an even degree of temperature, about the same as is the water; that is, not far from 45°, which seems to be about the nearest right temperature to secure safe wintering of bees. Not only this, but the same aperture out of which the water runs to the open air must allow of a return draft of pure air, this air being itself tempered by its contact with the water to about the desired temperature. Probably a large body of water in a cellar acts somewhat similar to what spring water does, only not so effectually.

My opinions or theories, whichever they may be called, on this subject, can be briefly sumarized as follows:

1. If dampness is not a cause of disease, it is almost always (always in

my experience) present with disease.

2. Colonies that have died from other causes than diarrhœa, are usually in a dry condition.

3. Those causes which produce dampness, whatever they are, are undoubtedly the ones that cause disease, if dampness itself is not the prime cause.

4. Bees seldom become damp or diseased in the winter, unless they are exposed to long confinement in a temperature lower than 45° or 50° above zero, or are exposed in the open air to a much lower temperature than freezing.

5. A running stream of spring water through a cellar is probably the best known means of securing an even proper temperature for a long period of time, as well as proper ventilation.

6. Bees seem to possess the power to keep themselves dry in a very damp atmosphere, provided the room in which they are kept is properly ventilated and kept at a steady medium temperature.

Williamstown, Iowa.

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For the American Bee Journal.

Prevention of Swarming.

CHAS. DADANT.

As the question on the possibility of preventing natural swarming is discussed in the bee papers, I desire to have my say about it.

I am satisfied; nay, our practice of about 15 years, has proved to us that natural swarming is always caused by a suffering, or by a need that bees are unable to satisfy, or, at least, by an abnormal condition of the colony which swarms.

The first main cause of natural swarming is the lack of room.

The second main cause is the rearing of queens during the honey season.

There are several other causes which force the bees to swarm out of the regular season, but these desertions *en masse* are not what is called natural swarming. We can control the first cause by giving our bees large hives and large combs, if we take care to enlarge the room before the harvest time, not by giving empty space only, but by giving empty combs or comb foundation.

We use large hives containing 10 or 11 Quinby frames, 18x11¼ inches; on these hives we place, before the honey season, a tier of 10 half combs. As soon as these surplus combs are about half full, we put between them and the hive, a second tier, furnished also with combs, or comb foundation, and sometimes a third tier, and even a fourth, if necessary.

The result is that our prevention of swarming succeeds so well that, in one of our large apiaries, numbering, last year, 62 colonies, which gave 15,000 pounds of honey, we did not get a single natural swarm. The same apiary, this year, increased to 87 by artificial swarming, gave 12,000 pounds of honey, and only two natural swarms.

Of course all our apiaries did not succeed so well, especially our home apiary, on account of our sale of queens; these queens being taken from full colonies. During the summer their colonies were placed under the second cause, that I have assigned to natural swarming, and they, or at least part of them, swarmed.

When a colony becomes queenless, it raises several queens. As soon as the first is hatched she tries to kill her sisters in their cells; but if it is summer, and if the honey harvest is good, the bees oppose this killing, and the young queen departs with a swarm.

It is, in part, on account of the annoyance of watching for the swarms, and of hiving them, that we have concluded to stop the rearing of any more queens for sale.

From our experience, in an apiary exclusively intended to raise honey, if the hives are large, giving to the queens ample room to lay three or four thousand eggs per day, if the bee-keeper has the care to provide his bees in time with plenty of surplus combs, or comb founation, the number of natural swarms will rarely exceed 2 or 3 per cent. annually. This percentage would be reduced to naught but for the natural death of queens. So small a number of natural swarms dispenses with the watching of the bees; for, in supposing that every swarm is lost, by this lack of watching, the loss is small in proportion with the value of the time expended in watching the apiary for weeks, and even months.

As to the means proposed to prevent natural swarming by retaining the queens in the hives by perforated tin or zinc, let me give my experience in that direction.

About 12 or 14 years ago, our lamented friend Quinby had contrived a yard furnished with tin all around, and fixed in front of the hives, to prevent the queens from following their swarms. The bees would fly from the yard, but the queens, who had one of their wings clipped, were unable to climb under the slippery tin, and compelled to remain in the yard and to return in the hives.

I had fixed 14 of these yards in front of as many hives, containing my best queens. When the first swarm went out, I watched the queen. I saw her make several unsuccessful attempts to climb out the yard; but I noticed also that the workers, who had not followed the swarm, were very angry against her, and treated her as they used to drones, when they want to get rid of them.

Of course the swarm came back in the hive.

On the next day the same colony attempted to swarm again, with the same ill-treatment of the queen; with this difference that two, or even three workers instead of one, were after her.

Two others of my colonies with yards, tried to swarm also on the same day, and both ill-used their queens, as the first one had done.

The three colonies tried again to swarm on the following day, and with the same increased anger against their queens.

At last, on the evening of that day, I found the dead body of the queen who had tried three times to follow her swarm; it had been dragged in the yard by the bees, after she had succumbed, killed or exhausted by the ill-treatment of her bees.

Of course I hastened to swarm both the other colonies, and to take out all the yards.

Now, it is certain that the ill-treatment of the queen by the bees, ill-treatment that I was able to see since it had begun in the open air, it is certain that the same ill-treatment will take place in the hives, where the queen will be prevented from following the swarms, whatever be the means used by the bee-keeper. Quinby yards or perforated tin will produce the same results.

Let me now advise my readers, if they want to prevent swarming, to resort to our large hives, and I dare to predict them good returns for the investment; for not only natural swarming teases the bee-keeper, but the colony before swarming lose time in remaining idle, and both the swarm and the colony do not give as much profit as a colony of the same population which have not swarmed.

Hamilton, Ill.

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For the American Bee Journal.

Working in Supers—Obstinate Bees.

WM. H. BALCH.

After reading of Mr. Ware's trouble mentioned on page 27 of the present volume, in trying to get his bees to work in supers, I was reminded of the trouble I formerly had with a colony of my best workers. There seems to be now and then a colony of bees that are so opposed to the wishes of the apiarist, that unless he puts them in the right position (or, in other words, hold some inducement out), they soon determine to crowd the brood out of the hive, when plenty of surplus receptacles are on, in readiness to receive the surplus of the honey harvest. The best remedy that I ever found, is the extractor. I never have found a case but what I cured, by extracting about one-half of the honey; if the colony is very strong, extract a little more. Place the empty frames in the center of the hive; the queen will fill them, and they having plenty of brood to care for, seem to think that a surplus of honey is needed. I have often had such colonies make up what they had lost, providing they were not neglected too long.

Oran, N. Y.

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For the American Bee Journal.

Lucas Co., Iowa, Convention.

A meeting of the bee-keepers of Lucas county was held at the Court House in Chariton, Iowa, on Dec. 29, at 2 p. m., for the purpose of organizing a Bee-Keepers' Association. The meeting was called to order by Mr. Wm. Malone, who stated the purpose of the meeting. Mr. J. H. Sydebotham was called to the chair.

Mr. Wm. Malone made a motion to call the association "The Lucas County Bee-Keepers' Association," which, being adopted, they proceeded to elect their officers, which resulted as follows: J. H. Sydebotham, President; W. P. Davis, Vice-President; W. L. Miller, Treasurer; A. Reusch, Secretary. The meeting then proceeded to adopt a constitution and by-laws, which was signed by the following: J. H. Sydebotham, W. L. Miller, A. Reusch, Wm. Malone, E. Sater, A. W. Troutman, W. P. Davis, D. C. Rook, Isaiah Robinson, W. O. Parmenter, J. G. Stafford, J. O. Voris, Mrs. Wm. Kent, Milton Good, Geo. R. Riker and Evan Morgan.

Messrs. W. O. Parmenter, Wm. Malone, and Geo. W. Riker made some remarks about wintering bees.

All interested in bee-keeping are cordially invited to attend our next meeting on the first Saturday in March, at the Court House in Chariton, at 1 p. m. A. Reusch, *Sec.*

For the American Bee Journal.

Des Moines Co., Iowa, Convention.

The bee-keepers of Des Moines County, Iowa, met according to the notice of the committee, and formed an organization by appointing John Nau as President *pro tem*, and Elijah Beans as Secretary *pro tem*, and then adjourned to 1 p. m. In the afternoon the first thing in order was to ballot for officers for the ensuing year, which resulted in the election of Geo. Bischoff, for President; W. R. Glandon, for Vice-President; John Nau, for Secretary, and A. M. Baldwin for Treasurer. A regular printed bee-keepers' constitution and by-laws was laid before the meeting, which was amended by changing the membership fee to 25 cents, and then adopted.

There was some interesting discussions which lasted about two hours, and then a committee, which consisted of John Nau, Samuel Catlin and H. W. Cartwright were appointed to meet the officers of the Agricultural Society and insist on them in giving liberal premiums on our industry, at the next annual fair in Des Moines county.

It was agreed to meet in regular session on the fourth Tuesday in April, 1884, at 10 a. m., in R. C. Crawford's hall, in Middletown, Iowa. The society is to be known as the Des Moines County Bee-Keepers' Association. The number of colonies represented was 217. John Nau, *Sec.*

Middletown, Iowa, Jan. 8, 1884.

☞ A meeting of bee-keepers will be held at the residence of W. Cossens, Monee, Will Co., Ills., on Monday, Jan. 28, 1884. All friends of improved management of the apiary, are invited to attend.

A. Wicherts, } *Committee.*
W. Cossens, }
B. Heyen, }

☞ Letters for publication must be written on a separate piece of paper from items of business.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Diseased Bees.

In looking over my bees to-day, I found them all right, except two colonies which stood side by side; they were dead. I found some decayed brood in a few cells which emitted a strong odor on opening the hive. Do you think there is any danger of it being foul brood? and would you advise destroying hives, combs, etc.? If you think it foul brood, please tell me how to prevent it from spreading. I forgot to say there was both honey and pollen in the hive.

J. D. Cunningham, Jr.

Orchard Hill, Ga., Jan. 9, 1884.

I have had no experience with foul brood whatever, but from studying it I am rather of the opinion that you have it in those two colonies. Were it my case, and I considered it foul brood, I should burn the both hives complete at once. It is, however, more than likely that the seeds of the disease are at present in other colonies, which will develop into the same condition as the two mentioned, this coming spring. By that time these will have infected others, and soon it is liable to go on all through your apiary. Prevention is the vital point to study.

Sundry Questions.

1. Do you consider extra prolificness of queens a valuable characteristic?
2. Of what value is the bee space above brood frames?
3. Do you think that cold alone would produce dysentery?
4. What is your opinion of the effects of being stung by bees for many years? B. F.

1. Several times during the past 10 years I have stated through the Journal, that I did not consider prolificness in the queen, beyond normality, of any special value, because with it is apt to go qualities of inferiorty, and because so small a part of the capital invested rests with the queen.

2. In my judgment, there is no claim in the Langstroth patent (now expired) of as great value. Mr. Langstroth's late statement that the Italian bee seemed to object to the space, must have arisen from the fact, that when he used the space, he used an objectionable and improperly constructed honey board, which they objected to, rather than the space. Right here and now I wish to state and have it remembered in the future, that I believe he who advocates doing away with this space, thus allowing receptacles of the upper and lower story to rest upon each other, retards pregress in apiculture, in just so far as his influence goes. I think it the duty of the Journal to call forth the expression of our well-known leading practical producers upon this subject, that beginners may know how to decide.

3. I cannot believe that cold alone can produce dysentery. It may cause bees to gorge themselves with honey or pollen, said honey or pollen producing dysentery, but so general an effect must have one general cause, and that surely is not cold, for bees often die with dysentery in its worst form in cellars whose temperature is never below 40°.

4. There is no doubt many persons who may receive into their blood the virus of bee stings, and into their lungs breathe the same poison, and continually throw it off as fast as received; but there are many who will become chronic sufferers from the effects of this poison, and it is my opinion that the number will astonish us that will be reported, after the business has undergone a score of years more of development in this country.

SELECTIONS FROM OUR LETTER BOX

Packed in Clover Chaff.

I commenced the honey season of 1883 with 2 colonies in Langstroth hives. On May 23 I bought 2 more. I have 13 colonies wintering well. I run one for comb honey, and got from it 60 lbs. in one-pound sections; and 2 for extracted honey. My young colonies gathered enough to winter on. I received in all 500 lbs. I pack in clover chaff, and rear my own queens.

John H. Shelt.

Napoleon, O., Jan. 14, 1884.

Hill's Method of Wintering Bees.

I can safely say that all would be much interested in reading a detailed account of the method of wintering, practiced by Mr. J. S. Hill, of Mount Healthy, O., as recommeded by Mr. Langstroth. I, therefore, respectfully suggest that Mr. Hill's plan be fully described in an early issue of the Weekly Bee Journal, either by Mr. Langstroth or Mr. Hill himself. While on this subject allow me to ask some experienced bee-keeper whether paper has ever been thoroughly tested as an absorbent over the bees in winter? I should hardly think it suitable to place directly next to the bees, but a few thicknesses over a light woolen blanket ought to confine much of the heat. Newspaper, for instance, is an excellent non-conductor, as any one can easily demonstrate by placing some between blankets of the bed during a cold night, or using as an extra wrap under the overcoat in very cold weather, it would not surprise me, if weight for weight, newspapers are amongst the best non-conductors. Now, the question is, will they absorb moisture well enough to use as a covering. W. J. RASIN.

Jenkintown, Pa., Jan. 7, 1884.

Poor Season.

Las spring I had 3 colonies of bees. They swarmed ten times, of which I saved nine; one flew away, I being away from home. In June, they were gathering honey rapidly, and there seemed to be a large supply. I anticipated a large amount of surplus honey in the fall, but the season changed (in July, I think), and became unfavorable, and but little honey was gathered afterwards. From my best colony (the first or second swarm) I took 28 two-pound boxes. This was nearly one-half of the whole amount taken off. WM. BRUNDAGE.

Lodi, N. Y., Jan. 7, 1884.

Our Nebraska State Convention.

We certainly had an excellent meeting. I have attended one North American and two Northwestern meetings, and am pleased to say there was more ladies present at our late meeting than I ever saw present at a bee meeting before. Having been present at meetings East, I think I am qualified to say that, although Nebraska is one among the baby states, she is taking long strides close behind, if not "neck and neck" with her old sisters, in the apicultural pursuit. We enrolled 51 members, but could not find time to take a statistical report. You will also see that foul brood, that terrible destroyer, has encroached upon our territory, and that we are making an attempt to stamp it out with the power of a united effort.

M. L. TRESTER.

Lincoln, Neb., Jan. 14, 1884.

Home Market for Honey.

I have 184 colonies in the cellar, all in fine condition at the present. Have wintered the bees in the cellar for several years, and have never lost a colony that had stores enough to last the winter through. My cellar is quite dry; keep the temperature as near 40° as possible. I can thus winter on about 10 lbs. of honey per colony from Nov. 1, to May 1, after which date stores are consumed quite rapidly, thus requiring not less than 30 lbs. of honey to carry a colony from autumn frost to clover bloom. I use the long shallow frame and work for comb honey, which sells readily at 18 cts. per lb. I can now sell 100 lbs. as readily as I could 10 lbs. 5 years ago, when I first offered honey for sale about here; and this is the result of working up a home market with a good article. I find the 1 lb. sections sell the best, also small cans of extracted honey. My advice to all is, attend to the home market first, if you have one; if not, make one. Although I have over 100 acres of good land, I can make the bees pay a much larger per cent. than land or domestic animals. The year 1883 was the poorest season for bees and honey I ever saw. My cure for dyspepsia is simply this: as you finish each meal take a teaspoonful of extracted honey, as you leave the table. Try it; I know it is a cure. For years I could not eat warm biscuit, fat meat, nor vegetables, pastries, cooked fruit, nor any thing good or rich, but now this misery has given place to a good digestion by the use of honey as above stated.

C. H. CHAPMAN.

Cohoctah, Mich., Jan. 15, 1884.

Extremely Cold.

We have had unprecedented weather for several days. Saturday, Jan. 5, was the coldest day we have had for several years; it moderated some on the 10th, but turned cold on the 11th, and it still holds. I fear our pets will suffer. On the 10th some flew out, but soon dropped on the snow to rise no more. G. W. ASHBY.

Valley Station, Ky., Jan. 12, 1884.

The "Cold Snap" in Kentucky.

The morning of Jan. 4 was the coldest weather we have had for 20 years. The thermometer was 20° below zero at 8 a. m.; and 12° below at 8 a. m. on Jan. 5. The weather has moderated, and a big snow of 8 to 12 inches fell yesterday; then a heavy wind from the south, and the snow melted rapidly. Some few bees were out; all my bees answered to roll call; they are on the summer stands snug and dry, with quilt and leaves in the upper story, and each hive has a sheet of tin on the corner, painted, and they are water proof. Peaches are all killed in the bud; and I fear much danger is done by the low temperature to small fruits. Prospects for clover are very fine, and that is our main crop for honey. N. P. ALLEN.

Smith's Grove, Ky., Jan. 11, 1884.

My Report for 1883.

Commencing with 12 colonies in the spring, I increased to 21, and 2 went away; I received 20 queens and had 750 pounds of honey (500 lbs. in comb, and 250 lbs. of extracted). I winter on the summer stands, mostly in chaff hives, with brood chamber full of honey. I sell my honey at home for 20 cts. per lb. JOHN WITSCHY.

Morrill, Kans., Jan. 14, 1884.

Splendid Winter for Bees.

I took my 60 colonies of bees out of the cellar about April 15. I have called the roll, and they all answered but 4 colonies; they had gone to their happy hunting ground. Forty of the rest were strong, and 16 weak. I sold the 40 strong ones for $10 each; kept the 16 weak ones to commence the season's work. They built up nicely. I had the first natural swarm on May 20; they increased by natural swarming to 37, and I got 1,000 pounds of comb and extracted honey. We have had a splendid fall and winter, so far. It has been very cold for a few days, and a little snow on the ground. My bees are all in the cellar, dreaming of what a happy time they are going to have in "the sweet by-and-by."

G. W. STARK.

Holmesville, Neb., Jan. 9, 1884.

From the Buckhorn Apiary.

My bees are doing well—all are quiet. Thermometer stands at 85°. From my own experience I feel satisfied that I have discovered the cause and a cure for dysentery. I send you a New Year's present of a pail honey, gathered by what some call "the little black imps." What was this honey gathered from? I have had 4,000 lbs. of the same during the past season. I put my bees in the cellar at different times. F. A. GIBSON.

Racine, Wis., Jan. 12, 1884.

[Thanks for the honey; it has some basswood in it, but it is mixed with other bloom; it is very nice and palatable.—ED.]

Bees Buried in a Clamp.

On April 19, 1883, I moved from Arcadia to Columbus, Wis., 85 colonies of bees; a distance of 200 miles; sold 11, and started with 74; increased to 99; took off 5,500 lbs. of comb honey finished, all white clover; 450 lbs. half finished; 150 lbs. of open combs, and 500 lbs. of extracted, making a total of 6,600 lbs. Thirteen colonies weighing less than required on Nov. 1 were killed and their combs stored away. I sold 2; put 84 into a clamp and buried them. They are wintering finely. I have sold one-half of my honey at an average price of 18 cents. I have the balance on hand. I use the Muth sections, 5¼x5½ square, 1½ inches thick, weight 1¼ lbs., which gives larger surface face than ordinary sections, and are more enticing to customers. E. A. MORGAN.

Arcadia, Wis., Jan. 14, 1884.

Report of a Beginner.

Last April I bought one colony of bees for Italians, but I soon found them to be hybrids. My brother gave me two colonies of brown bees; we transferred them to frames in May. In June I sent to two different places for Italian queens; I got half a pound of bees with the one from Kansas City, and let her build up, which she did in the best of order. I did what I could for them, when cold or rainy, by feeding them good sugar syrup. Early in August we moved them from the 5 frame hive to 9 frames. As a piece of comb was built to the side of the hive, in which was eggs and small larva, and so many bees wanted to stay, we left them; they built 8 queen cells from which we saved 3 queens, divided the bees with them and let them do the best they could, after giving them some frames of sealed honey. I did not get the queen from Georgia until the 12th day after she was started, being delayed on account of the flood. On July 4, I put her with a few black bees; it did not seem much over a month until the hive was full of beautiful Italians, and there were no blacks to be seen. I love my bees, although they sting me some. I obtained 77 lbs. of honey in 1 lb. sections. I was late starting with the bees, and there was no fall honey. I have 13 colonies, and I think they are well provided with good honey. I left them on the summer stands, protected with straw and chaff cushions. To-day the bees are out; some dropped on the snow, but rose again, as there is no wind. This is the first flight they have had since Dec. 21. Mrs. Kate Fisher.

Stewartville, Mo., Jan. 12, 1884.

Foundation with Natural Cells.

My 44 colonies are all alive to-day, taking a flight in the open air, having a good time. I used 75 pounds of flat-bottom foundation, last year, and if there was an old comb in the hive, the queen would lay in the old comb and not touch the foundation, unless forced to use it. It appears that there is no place for the eggs. I found the eggs at one side of the cell, not in the centre; in concave-bottom, the egg would be in the centre of the cell, showing me it was not natural, and the queens did not like it.

H. Richey.

Sing Sing, N. Y., Jan. 14, 1884.

Diphtheria—Death—Hygiene.

It was with no little pleasure that I read Mr. Pringle's letter under the above caption on page 23 of the Bee Journal. Mr. Pringle stands square on his feet, and on solid ground, as I well know by experience in my own family. As many enquiring ones do not know where to look for aid in their extremity, I would suggest that Mr. P. make a list of books that he would recommend, and that our worthy editor keep these books for sale to those who may need them.

E. M. Hayhurst.

Kansas City, Mo., Jan. 14, 1884.

[We will do so, with pleasure.—Ed.]

The Season in Arkansas.

The season of 1883 I will call an ordinary good one. Colonies in two-story twenty-frame Langstroth hives have given from 75 to 100 lbs. of extracted honey; those in box hives 25 to 30 lbs. The fall of 1883 was fair. We only had cold snaps on Nov. 17 and 18, but on Jan. 2 it turned cold, and on the 6th and 7th we had snow for three days; at daybreak the thermometer was at zero. To-day, at daybreak, it was 12°; at noon, 45°, with a few bees flying. My bees are in one and two-story hives, and in good condition. Those having upward ventilation are very quiet and dry; those having no upward ventilation are a little frosty. The honey market is poor; business dull; no trade; cause, the failure of the cotton crop and drought. Frank Thiaville.

Forrest City, Ark., Jan. 10, 1884.

Pollen and Brood Rearing.

In an article by G. M. Doolittle (page 606 of the Bee Journal for 1883), it would appear that old bees will not eat pollen when not rearing brood. I think my experience proves the opposite. One colony starved this winter which I neglected to give provision enough in the fall. The bees appeared to be in good condition otherwise, but not a particle of honey or pollen could I find in the hive. I found one cell in the centre of a comb which was capped, this being the only sign of brood. There were no pains taken to exclude pollen from this hive in the fall. I like to read the Bee Journal very much, and cannot do without it. W. Fisher.

Hamler, O., Jan. 16, 1884.

A Real Winter.

I put 17 colonies in winter quarters on Nov. 1, on summer stands, *a la* Heddon. They had a flight on Nov. 24; since that time we have had a winter. On Jan. 5 and 6 it was 20° below zero; to-day my bees are flying some; it is 45°. I looked at some colonies, and they are all right yet. The last two weeks have been the coldest that I ever knew, in the last 20 years, in this section of the State.

J. W. Sturwold.

Haymond, Ind., Jan. 14, 1884.

Bees Alive and Well.

I am alive and well, and so are my 70 colonies of bees; they passed through the blizzard all right, without loss. They had a grand flight on Sunday, Jan. 13. James Ronian.

Villisca, Iowa, Jan. 15, 1884.

No Winter Loss or Spring Dwindling

Bees are wintering well; mine took the first flight of 1884 yesterday, and all look bright and in the best condition. They are left out-of-doors, packed in chaff. I have packed them this way for four winters without the loss of a single colony, and they never spring dwindle. J. G. Norton.

Macomb, Ill., Jan. 14, 1884.

Bees Packed in Leaves.

We have just survived a very cold spell of weather, 30° to 37° below zero; but, to-day, was quite mild, so much so that the most of my bees were flying some, and but few were left on the snow. My bees are packed in leaves on the summer stands, and really look comfortable. The honey flow stopped, last season, about the last week in July. I started with 105 colonies in the spring; increased to 133, and got about 300 gallons of extracted and 3,000 lbs. of comb honey, and 100 lbs. of wax for my season's crop. Not so bad for a side show. I have not had time to attend to the selling of honey, as I have wished. I have now sold some over $300 worth, principally in the stores in wholesale lots, but have to sell from 12½ to 15 cents per pound. I would promise you great results in bee-keeping only for two obstacles in the way, these are, successful wintering and the disposing of honey at fair prices. It seems that extracted honey finds but little demand, this season. I cannot see why honey is so little used as food when it can be bought at 12½ to 20 cents per pound, when butter brings from 25 to 35 cents per pound, and adulterated syrups 85 cents per gallon. Considering the advantages of honey for food and medicine, it is by far the cheapest sweet now sold in the market. H. S. Hackman.

Peru, Ill., Jan. 13, 1884.

A "Bee Story."

A neighbor of mine, in the fall of 1882, put a colony of bees in his kitchen chamber, to winter them, the boards of the floor are loosely laid, and consequently a high temperature was maintained where the bees were. A considerable quantity of maple sugar was stored in the chamber. The bees worked on the sugar most of the winter, increased very fast, and on Feb. 22, a fine swarm came out which was hived, and when the bees were moved to the summer stand, in April, the old colony was very strong, the swarm had built a large quantity of comb, and had about 15 lbs. of honey. How is that for "winter dairying?"

H. H. McNett.

Carpenter, Pa., Jan. 14, 1884.

* * *

The Dowagiac, Mich., *Times*, of Jan. 9, contains this report of Mr. Shirley's apiary:

W. H. Shirley, the Glenwood apiarist, has put into winter quaeters 167 colonies of bees, all of which he thinks are in safe condition for wintering successfully. His honey crop last year was a good one, as he has already sold 1,800 pounds of extracted honey, and his comb honey aggregated 5,000 lbs. Mr. Shirley is a close student of Mr. Heddon's system of bee-keeping, and his business ability and industry enables him to carry it out successfully. He is a gentleman with whom it is a pleasure to deal; and he is destined to take a front rank with the honey producers of the State.

* * *

Local Convention Directory.

1884. *Time and place of Meeting.*

Jan. 28.—Bee-Keepers' meeting at Monee, Ills.
A. Wicherts, W. Cossens, B. Heyen, Com.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

* * *

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While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

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☞ As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the BEE JOURNAL, on the first page of this paper.

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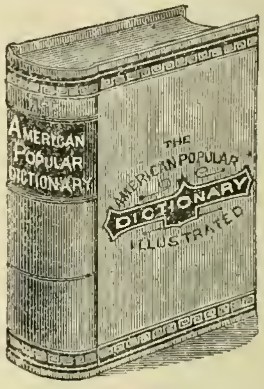
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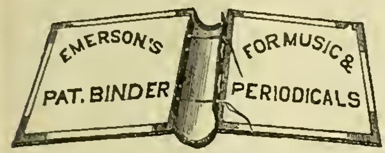

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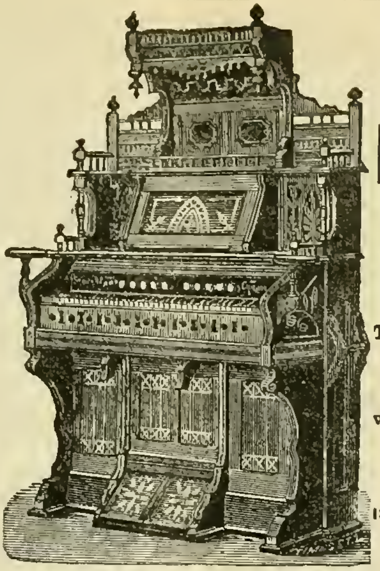

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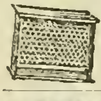

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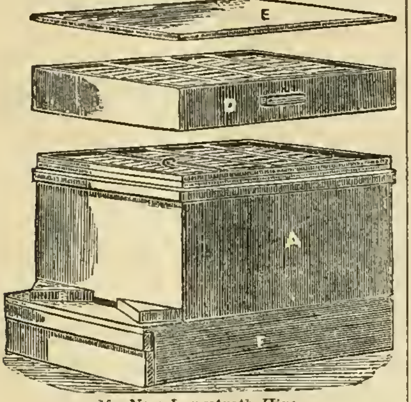

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ESTABLISHED IN 1861.

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VOL. XX. No. 5.

THE WEEKLY EDITION
OF
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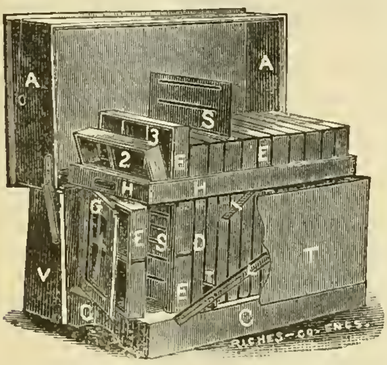
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VOL. XX. CHICAGO, ILL., JANUARY 30, 1884. No. 5.

THE AMERICAN BEE JOURNAL

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EDITOR AND PROPRIETOR.

Nomenclature of Bee-Keeping.

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2. Does not a swarm mean simply the bees, while a colony means bees, hives, combs, etc.?
3. Does a stock mean a colony, or a whole apiary?
4. Are workers erroneously called neuters; if so, is there a gender other than the two?
5. Is the white stick candy we get at the store, equally as good as that we make of sugar to give to bees?

S. Sutton, N.H. F. M. CHENEY.

In replying, we will do so by numbers. in the order the questions are propounded to us.

1. The word "artificial" is defined to mean something *un*natural, fraudulent, or an imitation. We do decidedly object to the calling of *meal* artificial bee bread. There is nothing artificial about it.

When "comb foundation" was first made, some one called it "artificial comb," and that erroneous name would. we verily believe, have been what it would have been known by to-day, but for the vigorous protest we gave in the BEE JOURNAL some 5 or 6 years ago.

We have no use for the term *artificial* in all the vocabulary of bee-keeping.

2. No, sir; a "swarm of bees" can only be so called when in the act of leaving the parent colony for the purpose of increase. When organized and devoted to their work, they form a "colony." To call such bees a "swarm" is, at best, a misnomer.

3. A "colony" should never be called a "stock"; that term should only be used to designate the quantity comprising one or more apiaries; or, in a more general sense, the insects themselves—such as "improving the stock," meaning the *race*. It has come down to us, by a corruption of the German word, "Bienenstocke," meaning a straw bee hive in which bees were formerly kept—almost universally, and even now, are quite generally so kept in Europe.

4. "Worker bees" are undeveloped females; queens are females, but fully developed; drones are males. A "neuter" would be neither the one nor the other—neither male nor female—and to use such a term to designate bees, would make a "gender other than the two" necessary. So when worker bees are called *neuters*, it is highly improper.

5. Having no experience in candy-making, we cannot say whether it is as good or not. Mr. Heddon replies thus: "I once worked at candy-making; in those days all our sugars were pure cane. If stick candy is used, get that which is the softest and most creamy. I think there has been a mistake made, if you find it necessary now to feed candy; you should have fed them a proper amount of pure sugar syrup in the fall."

☞ Mr. J. M. Hicks gives the following report of how the bees are wintering, in the *Grange Bulletin*: "Bees in this vicinity are wintering well so far, and yet the thermometer registered 26° below zero Jan. 4, here at Battle Ground, IND., and at Lafayette, seven miles distant, it was 30° below zero.

☞ Mr. Henry Alley has sent to our museum one of his Drone Excluders. It is a queen and drone-trap, combined, and was described on page 56 by Mr. A. It is nicely made, and recommends itself as an article, the need of which has long been felt by every bee-keeper.

Convention at Davenport, Iowa.

The coming convention at Davenport, Iowa, on Thursday, Friday and Saturday, Feb. 21, 22 and 23, promises to be a very large gathering of the bee-keepers of Eastern Iowa and Western Illinois. The Davenport *Democrat* of Jan. 22, contains the following editorial remarks on the "prospects:"

> The prospect is that the Bee-Keepers' Convention which is to be held in Davenport on the 21st, 22d and 23d days of February next, will be the largest gathering of persons interested in the producing of honey ever held in the State, if not in the West. President McCagg, of the Local Association under whose auspices the convention will be held, is in receipt of letters from Independence, Fayette, Iowa City, Des Moines, Grinnell, Muscatine, Ottumwa, Clinton, De Witt, Monticello, Wilton, Marengo, Dubuque, Marshalltown, Delhi and Waterloo, stating that there will be delegations present from Buchanan, Fayette, Polk, Muscatine, Wapello, Clinton, Iowa, Dubuque, Jones, Marshall, Delaware, Blackhawk, Poweshiek, Benton and Linn counties, in Iowa, while there will be good delegations from Rock Island, Whiteside, Henry, Carroll, Stephenson and other counties in Illinois.
>
> It is well known that the last year was a disastrous one for bee-keepers, as only about a third of a crop of honey was produced in Iowa and Northern Illinois, and persons who intend to continue in the business do well to come together for consultation. Among the prominent men who will be present is Mr. Thos. G. Newman, editor of the AMERICAN BEE JOURNAL, of Chicago, who will spend two days in the convention, will deliver an address each day, and take part in the proceedings and discussions with the other members. The veteran Langstroth has been invited, and writes that he will be present if the weather shall prove favorable enough to allow a man of his age to travel.

We expect to be present according to the above notice, and hope to meet a large number of the bee-keepers of the surrounding country.

☞ We now club the *British Bee Journal* and our Weekly for $3.50. See change in prices on first page.

Intelligence in Bees.

Mr. Geo. E. Hilton, of Fremont, Mich., has sent the following clipped from the *Golden Days*, and desires it inserted in the BEE JOURNAL:

Nowhere in the working of natural law, in the lower order, do we see more wonderful exhibitions of instinct, nearly approaching to intelligence, than in the common honey bee. This little creature is truly "fearfully and wonderfully made."

Take, for instance, the feet of the common working bee. They exhibit at one and the same time a basket, a brush and a pair of pincers. One of these articles, indeed, is a brush of extreme fineness, the hairs of which, arranged in symmetrical rows, are only to be seen with the microscope.

With this brush of fairy delicacy, the bee continually brushes its velvet robe, to remove the pollen dust, with which it becomes loaded while rifling the flowers and sucking up their nectar.

Another article, which is hollowed like a spoon, receives all the gleanings which the insect carries to the hive. It is a panier for provisions. Finally, by opening them one upon another, by means of a hinge, those two pieces become a pair of pincers, which render important service in the construction of the combs, and it is with them that the bee lays hold of semi-circles of wax below its abdomen, and carries them to his mouth.

The mechanism of the sting is no less extraordinary. This weapon consists of a sheath, inclosing two needle-shaped darts of exceeding fineness, placed side by side.

Toward the point they are armed with minute teeth like those of a saw, whence it happens that the bee is sometimes unable to withdraw this little javelin from the enemy it has pierced, for so powerful is the impetus of the sting that it will pierce even the thick human skin the twelfth of an inch deep.

When the sting makes the wound, the acrid poison is squeezed in from the bag near its base, the structure and process being nearly identical with those of the poison fangs of serpents. Only the females and the neuters of working bees have these formidable weapons, the males or drones being defenseless.

Let us glance at some of the exhibitions of wisdom shown by these little fellows which make such a buzzing through our gardens and hedges, and stand among all the insects as the nearest friends and familiars of man.

When an enemy little to be dreaded sneaks into a hive of bees, the first sentinels that see it pierce it with their stings, and in the twinkling of an eye the corpse is tossed out. The work is not interrupted for a moment.

But if the intruder is a big, strong slug or worm, all the workers are thrown into agitation. They all rally and pierce the enemy with a hundred stings. But what is to be done with such a heavy body? The little feet of all the tribe would not suffice to stir the corpse, and the narrow door of the hive would not allow it to pass. Its putrid odors would, however, soon infect the colony, and develop the germ of some malady. How are they to escape from this danger? The little republicans take counsel, and come suddenly to just such a resolution as they would have done if they had thoroughly known one of the arts of ancient Egypt. As under the Pharaohs men embalmed the corpse of animals—either with a religious view, or to preserve themselves from decay—so all the bees now set to work to embalm the dead animal, the presence of which is a menace to them. For this purpose the workers scatter themselves about the country in order to gather the resinous matter which clings to the buds, for this is what replaces the essences and aloes used by the undertakers of the Nile. The bees closely envelop the dead body with this in the form of little fillets, and deposit all around it a thick, solid layer, which presarves it from putrefaction.

Unveiling the Fraud.

It has now come to the light. We well knew there was some reason under cover why the glucose men were working so persistently to prove that their product was an honest one. Mr. Henry Jones, of Chesaning, Mich., has sent us a copy of the Detroit *Post and Tribune*, with the following item marked:

The decision of the National Academy of Sciences that glucose, as at present made, is healthful, is likely to bear fruit in an unexpected manner. It is understood that a number of glucose and starch manufacturers will soon apply to the proper authorities to have distilleries surveyed at their factories, in order that they may go into the business of making distilled spirits from glucose. Distilleries must, however, be on premises separate from factories under the law. Some of the Western distilleries are said to have already discovered this possible opening of a new competition, and they will make an earnest fight to induce Congress to place some restriction on the manufacture of spirits from glucose. The applications of the glucose men will be made first to the internal revenue collectors of the various districts, and will then go to Commissioner Evans for final approval.

So they have discovered that they can make whisky of the diabolical stuff, and the "boom" is to accomplish that object. We shall watch developments with interest.

☞ We have a few photographs (cabinet size) just taken, of the Rev. L. L. Langstroth, which we can send to those desiring them for 50 cts. each, postage prepaid.

☞ Items like the following are now to be found in nearly every paper, designing, of course, to give glucose another "boost:" "The National Academy of Sciences has reported to the Commissioner of Internal Revenue that starch sugar contains no injurious ingredients." The above is taken from the Norwalk, O., *Chronicle*, and was sent us by Mr. H. R. Boardman, who is firm friend of honest trade and unadulterated food products.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 21, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 15@21c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & CO.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY.—Receipts liberal, and sales satisfactory. White comb, 1 and 2 lb. sections, 17@18c. I could place several thousand pounds of dark, fall extracted honey, at 8@9c. Who has any? Do not all speak at once.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Market is quiet but steady. A shipment of 1,073 cases was made this week per sailing vessel to Liverpool. White to extra white comb, 15@18c.; dark to good, 9@11c.; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Comb, 13@18c.; strained and extracted, 7@8c.

BEESWAX—Firmer, at 31@32c.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Honey continues in excellent demand, as reported last; every lot of choice white comb is taken up as fast as it comes at 18c. in quantity for 1 lb. sections, and an occasional sale at 19; in a very few instances only, 20c. has been reached. Broken lots and second quality is very slow sale. For extracted there is no demand.

BEESWAX—Is eagerly inquired for at 28@30c., but none to supply the demand.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CORRESPONDENCE

For the American Bee Journal.

Those Six Frame Hives.

G. M. DOOLITTLE.

On page 25 of the BEE JOURNAL, Mr. D. G. Parker asks about those 6-frame hives, I mentioned on page 626 of the BEE JOURNAL for 1883.

In order to make all plain, I will say that the hive which I use mostly is 24 inches long, 12 inches wide, and 12 inches deep. As the frames are but 11¼x11¼ inches square, they must, of course, go the short way of the hive. Five inches from either end of the hive is placed a slotted division-board ¼ of an inch thick, the slots being so arranged as to form openings at the right place for the bees to work to the best advantage in the sections, which are to be placed in each of these 5-inch spaces, which are partitioned off for said sections. This leaves a space 12x12x13½ inches for the brood-chamber, in which is placed 9 Gallup frames. The entrance to the hive is a ⅜-inch slot cut from the bottom of the hive the whole length of the brood chamber (or 13½ inches long), and is regulated by entrance blocks. When the bees are being prepared for winter, the sections are taken out and a strip of common cotton cloth spread over the frames, and down each side over the slotted division-boards. The 5-inch spaces are now filled with chaff, and a chaff or sawdust cushion placed over the frames. Thus the bees are during the winter. (Please bear in mind that I do not manufacture hives for sale, nor keep for sale the pamphlet describing my hive.) When spring arrives the bees in these hives packed with chaff, etc., are stimulated by spreading the brood, and by other ways familiar to the apiarist, till the 9 frames are filled with brood.

As the weather is always changeable in the spring and early summer, the chaff packing is a great help to the bees, by the way of enabling them to maintain an even temperature, and thus our hives are filled with brood a little earlier in the season than they otherwise would be.

As it is still too early for swarms to issue to the best advantage for the production of honey, and desiring all the bees possible at this season of the year (these bees are in reality our crop of honey). I remove the chaff and cotton cloth from one of the 5-inch spaces, and place three frames of brood taken from the brood-chamber beyond the slotted division-board, placing empty combs in the brood-nest in place of the removed frames of brood. In a week the other end of the hive is served in the same way, which gives me, as will be seen, 15 frames in a hive, thus securing a large force of bees with no disposing to swarm thus far. As the brood in the frames which are set over in the 5-inch space, should be all sealed when set there, it will be seen that in 12 days the brood should be all matured, and as the queen rarely goes into these spaces to deposit eggs. We have these combs empty of brood, or nearly so, when the flowers begin to secrete honey. They can now be taken out and reserved for new swarms. If any of the combs we wish to take out still have brood in them, they can be used in forming nuclei, or building up those already formed. When I have decided that it is time to put on the sections, I take out the six combs which are in the side box apartment, and set in one tier of sections next to the division-board. (The 5-inch space accommodates two tiers of sections.) I next take from the brood-chamber two frames of unsealed brood, and place behind the one tier of sections; placing two frames of the empty combs, taken out of the 5-inch spaces, in the brood-nest where the unsealed brood was taken from. I now put sections on top and close the hive.

By placing the frames of unsealed brood behind the tier of sections, I virtually have the two tier of sections in the centre of the brood-nest, in which case the bees go to work in them at once, if there is any honey to be obtained. Such a course also has a tendency to keep the bees from swarming. At the end of a week the two frames of brood are taken out from behind the sections and placed in nuclei, or where we can use them to the best advantage, and the tier of partially filled sections pushed back so as to place an empty tier between them and the brood-chamber, when we have a complete number of sections on the hive, and have done it in such a way that we have secured the greatest working force possible, and have also enticed the bees into the sections at the proper time, and that with but little disposition to swarm so far. Now, as the sections begin to get filled, and the brood-chamber remains undisturbed, a part or all of the colonies will soon swarm (I should be pleased if they would not do so).

Now to secure the most honey for the rest of the season, we proceed as follows: When a swarm issues from a hive, the old colony is moved to a new stand, and the swarm hived on the old stand, which secures us nearly all the working force from the parent colony. A part of the sections are taken from the old hive and taken to the new hive. In this new hive is placed 6 Gallup frames (in some I have used only 4, but do not like it as well as 6), and next to these frames are placed a tier of empty sections, while back of this tier is placed a tier of those partly full, taken from the parent colony. The top sections are now put on, and the swarm is hived. The work done in the sections by a swarm thus treated for the next ten days, is almost marvellous.

During the first week after moving, the old colony will do but little work, but at the end of this time they begin to be populous again, and in a few more days are in a flourishing condition. As soon as the young queen begins to lay, 3 of the 9 brood combs are taken out (thus leaving only 6), and the sections brought up to these combs when all are in the best possible condition to give a good yield of comb honey as long as the harvest lasts. When I first started on this plan, I thought that these 6 combs would not contain honey enough at the end of the season for the colony to winter on, but I find by experience that it has a tendency to reduce the brood, and I have in September from 18 to 22 lbs. of honey in the frames with a very small colony of bees for wintering. If these small colonies of bees will only winter as well as the large ones, I shall fully accomplish my object, which is to get the largest number of bees possible in just the right time for the honey harvest, and rear as few at other times as is consistent with preparing for said harvest.

This getting the bees in the right condition for the harvest may be called my hobby. If so, "'tis well," for I believe it one of the best hobbies ever rode upon by any one producing comb honey.

Borodino, N. Y.

For the American Bee Journal.

Some Stray Thoughts.

W. H. SHIRLEY.

While reading the excellent articles upon Theory and Practice in the back numbers of the BEE JOURNAL, we have often asked ourselves this question: "How many facts have there been proved, without theory first teaching the way?"

It looks to me as though it is proved beyond a doubt, that bees have wintered in all sorts of repositories, and put in at all times and in all conditions, and have come out in good condition in the spring.

I am not well acquainted with Mr. Humidity, neither am I with Mr. Right-Temperature, nor am I in "hand and glove" with Mr. Pollen Theory. But taking my own experience and experiments, and adding Mr. Pollen Theory to it, backed up by Mr. Granulated Sugar, and then Mr. Pollen Theory, it seems to me, has the best of the argument on wintering.

I would like to ask bee-keepers: has any one lost, or heard of any one losing a colony of bees with dysentery, that was fed on granulated sugar? Speak out, and let us see if that "fact" cannot be turned into theory!

Some time ago, the plan of giving the number of colonies kept by the writer, at his signature, was practiced by some writers, and it was favored by the late convention at Toronto, I think. I thought it was a good plan, for it helped one to estimate the "breadth" of the writer's experience. (I am like Mr. Hutchinson in that respect). But please let me add something more: Number of colonies, and then the number of years that the bee business has been made a specialty. That is what I want to know. I have not time to read long articles from some novice with 3 or 4 colonies of bees and a large apiary in his head, though his head may be ever so large.

Now, one word about bee-keeping being in the hands of specialists. How many bee-keepers are there to-day, who are making the production of honey their whole business, and getting rich? Now, please do not head the list with A. Grimm, but let us have another name, just once. The bee-keeper who has a farm, a hennery, a supply trade, or some "bee fixing" in connection with his bees, will in time get left behind by the specialist. It is so in all other branches of industry; why not in the bee business? I propose to have bees, hives and fixtures, etc., so fixed in the near future, to be able to sell honey to those who make the bee business a side issue.

No. of colonies, 165. The production of honey a specialty for the past 6 years. Average No. of colonies kept during that time, 100.

Glenwood, Mich., Jan. 7, 1884.

For the American Bee Journal.

Primary Conventions.

BY "THREE NOVICES."

Neighbors, I have called you, to discuss with you, the practicability of organizing ourselves as a precinct society. I am tired of studying alone. I have discovered that I can make better headway when I have somebody with whom to discuss matters. My energy is better concentrated on the subject under consideration, and, in conveying my thoughts to others, it gives force and demonstration to my own ideas.

C. Do you not know here is only us three bee-keepers in the precinct? And after the heavy winter losses we have had of late, we are not likely to be any more, very soon. What sort of a convention do you suppose we would make up?

L. A first rate one! We are all of us of an inquiring turn of mind, and take a somewhat different view of matters. We could not fail to make it interesting and profitable for all.

R. I think we had better try to organize a county association.

C. With but few exceptions I do not think the State associations have accomplished anything. We often find that the most successful bee-keepers stay at home and leave the work to the novices, who spend most of their time in the recital of matters that has nothing to do with progressive bee-culture; take it all in all, I do not think they are a success.

L. Let me tell you why I think they are are not a success. It is as you say, the novices take up too much time in telling how their disorganized bees behave in one way and another. It has nothing to do with a well-organized colony. They ought to learn this at home in oft-repeated practical and theoretical lessons, such as we should endeavor to make our precinct meetings.

C. I am satisfied with the classical works handed down to us by recognized authority. I do not think we can improve upon them.

L. It is only conservative men like yourself who consider their work complete. They certainly do not want it so understood themselves. They tell us here is a machine that will do the work, but we are aware that it can be improved upon, and it will be for you to do it, even if it should become necessary to alter some of its fundamental principles. When we strive to do so, and then only do we fully appreciate the value of their work, and make it possible to derive the greatest benefit from it, for ourselves and prosterity.

C. That will be for the bee papers to attend to.

L. The papers are what the bee-keepers make them. They are doing excellent work, but if we can in any way aid them it will only be our duty to do so.

C. By what means shall we able to aid them?

L. We will keep a record of our works and forward copies of the same to Mr. Newman, and if he thinks them worthy a place in the BEE JOURNAL, he shall be at liberty to publish them.

C. They will only laugh at our silly proceedings.

L. They may, though I think we should be able to make them intelligent enough to merit criticism. We will lay no claim to any defined knowledge, but place ourselves before them as mere novices. There is one thing about the papers which we would try to improve upon. Often have I seen valuable hints given well calculated to elicit inquiry into matters of importance, only to be passed into oblivion without a single comment having been made upon them, probably because they were not introduced by what you would call "recognized authority." We will make a practice of scrutinizing those points whether they spring from a novice's fancy or a professor's store of knowledge. Our precinct meetings should be the primaries of conventions. Here the ground work should be done and materials gathered. Our monthly reports should be collected for the county association, who should meet twice a year to review and condense our work and forward copies to the State association, which meet once a year to discuss matters of a more general character; to see that the honey resources of our State are developed, and elect delegates to the National convention. It would be for this latter to perform work of a higher order, and see to it that our industry was placed in its proper light before the commonwealth. Thus you see, if our several conventions were characterized by their special functions, they would be more sensitive to their duty, and more likely to accomplish it.

C. Your plan for the conventions is good, I admit, but suppose there was only one man in some precints, or some one should be found who would have nothing to do with us, he might foster foul brood in his apiary, and we would know nothing of it until the mischief was done.

R. We would appeal to the law, and go there and destroy his bees for him.

C. Now, you always take such radical views of things, what would the eccentric man be doing all this time, or what would he be likely to do afterwards?

L. We had better let the law alone. I think if he was a man of reason, he would soon concur with us; if not, we would dispatch a phrenologist to examine the case.

C. *Apropos*, foul brood. Do you think we shall ever be able to get this terrible calamity under our control?

L. Yes sir! I am sanguine enough to believe that before 2 years roll around, we shall have it so under our control as to make us laugh at the idea of having allowed ourselves to be frightened by it.

C. What do you think of the article on foul brood in the BEE JOURNAL, by Mr. De Layens. He seems to have partially succeeded in curing it.

L. There is a specimen for you. It is the best article on the subject that ever came to my notice. It knocks their contagion theory all in the dust, and it strengthens me in my belief that we shall never have a reliable cure, but what is better, a never failing preventative. He did not succeed in partially curing as much as in partially "wearing" it out, though he started on the everlasting cure, he discovers a tolerably good preventive, and I hope he is now successfully pursuing his course to the bottom of it. When we set to work on this subject, which I think we had better do the first thing, the spring is the critical time when bees begin to rear brood, then we will take this article for test, and dissect it from beginning to end. And, now, you have heard my views on precinct conventions. When you have made up your mind about it, come over and let me know. If you think favorably of it, we will put the scheme into practice.

Paradox Apiary, Jan. 15, 1884.

For the American Bee Journal.

Statistics of the Honey Crop.

C. C. MILLER, 172—251.

I do not know that any one doubts the desirability of obtaining reliable statistics of bee-keeping, but how to do so in a manner that shall inure to the benefit of bee-keepers is as yet an unsolved problem. In 1882, the North American Society appointed a committee, of which I was chairman, to collect statistics. The effort was made in what was supposed to be the best way, and I suppose few will imagine the many days' labor devoted to the matter with no reward except being accused by some of sinister motives in the matter. Possibly no fuller report was ever obtained, but for practical purposes it was so meager as to be of little if any value. The plan pursued was the very simple one of having each bee-keeper send his report to one address, so they could be all tabulated together. But the majority did not send in reports. No action was taken by the National Society at its last meeting to do any thing further in the matter; but it certainly does seem to me a matter of so much importance that it is at least worth talking about.

Whilst there may not be a bee-keeper in the land who would doubt the desirability of obtaining accurate statistics, it may not be amiss to consider *why* we want them, as also *what* and *when*. Passing by all other reasons, I am free to say that as a producer of honey, my chief answer to the question *why* is, that I may better know how to sell my honey, my *what* is the amount of honey produced in the various sections of the country, and my *when* is in summer or fall, immediately after the crop is taken, and before I put my honey on the market. I know these that I have mentioned are not by any means all the things to be considered, but they are the ones of the greatest importance, of the greatest money value.

Like all other things, the market value of honey depends on supply and demand, and to know what price to expect for my honey, I should know something about the supply of honey in the country. If this year's crop is double that of last year, the price must be lower, and *vice versa*. But if we know nothing of the amount produced, both buyer and seller are in the dark, and we may sell early at a low price to find that we might have done much better later, and another year may suppose the crop light, hold our honey at a high figure and refuse a fair price early in the season only to sell for much less late in the season. A few days ago I learned from a prominent dealer that he had offered "20 cents for a lot of comb honey in December, which did not bring more than 12 cents in the latter part of February." Now, I do not believe that either producer or consumer is benefited by this state of things, but until some plan is adopted for securing imformation of the right kind and at the right time, this uncertain state of things is sure to continue, resulting in an annual loss of thousands of dollars.

Now the question comes, how are we to obtain this information? I do not know. I have thought much about it, and have studied various plans without being satisfied in full with any. If all interested will do a little thinking about it, and offer suggestions, we may arrive at something feasible.

Better than nothing would be to continue the plan tried already. Possibly, if all the bee papers urged it, a fuller report might be obtained next time.

Mr. O. O. Poppleton, vice-president of Iowa, suggests a plan that I think is better. He suggests that each vice-president of the National Society (I hope no Canadian friend will take umbrage at my using the short and familiar name "National" instead of "North American." We are all one nation of bee-keepers). Mr. P. suggests that each vice-president gather statistics from his own State or territory, and forward them to the secretary to be compiled by him. This plan is good *if* the vice-presidents can secure the reports. I am of the opinion that more would report to a man in their own State than to any outside.

Another plan. Let influential parties in the different States secure the passage of laws, such as exist in Illinois, and perhaps other States, making it the duty of some officer of the State to collect the desired statistics. Very fully reports were thus obtained in Illinois last year, but whether they were early enough to be of much service is doubtful.

The fact that so many send individual reports to the different papers each year for publication, suggests the thought that if the names were to be published in full, many more would report. This would be a matter of considerable expense, which might be kept down by limiting the reports to those who had not less than 5, 10 or 20 colonies.

Another plan would be to have each bee-keeper send with his report the trifle of 5 or 10 cents, then let all the names be printed and a copy sent to each one who sent in his pittance and report. In this case each name could be printed, if only owning a single colony, as he would bear his full share of the expense.

Now, friends, do not let us drop so important a matter as this without at least trying to get at something practical. I think I could well afford to pay $5 or $10 annually for a full knoweldge on this subject. I feel confident of the co-operation of the bee papers, and I know that the BEE JOURNAL, which has done so much in this direction, will not go back on its record.

Who can suggest a plan that will work, or show the faults in what has been done or suggested?

Marengo, Ill.

* * *

For the American Bee Journal.

Champlain Valley Convention.

The Champlain Valley Bee-Keepers' Association, met at the Addison House, Middleburg, Vt., Jan 10, 1884; called to order at 11 a. m., by President Crane.

On motion, V. V. Blackmer was made secretary *pro tem.*

The Chair appointed a committee of three on nominations. A committee was also appointed to select topics for discussion. The committee on nominations reported: for President, H. L. Leonard; Vice-President, E. P. Wolcott; Secretary and Treasurer, J. E. Crane; and they were unanimously elected.

President Leonard, on taking the chair, made a short speech, expressing his thanks for the honor, and his appreciation of the great usefulness of the Association in building up the industry of bee-keeping.

The meeting now being open for business, Mr. Isham asked, "Is it desirable to exchange queens with other bee-keepers for the benefit of their apiaries?"

President Leonard thought it not desirable.

The secretary thought it might often be of great benefit. He had much more respect for black bees, after having used them in some of his apiaries during the past season.

Question: "Will some strains of bees of the same race prove more productive than others, or will some colonies of bees with the same care, in the same condition in spring, prove more productive than others?

Dr. Boyd thought the difference owing to good crosses or the innate good qualities of some strains of bees, and that such good qualities should be perpetuated by careful breeding.

Mr. Forbs: Some of my colonies that were in equally good condition in the spring, would vary greatly in productiveness. Others spoke to the same effect.

V. V. Blackmer asked which had wintered best, the black or Italian bees? Answered by E. Smith and G. S. Brown, in favor of the black bees.

H. B. Isham gave his experience with the two races the past season. His Italian colonies had given an average of 32 lbs. more of honey, and as many swarms as his black bees, to the colony.

R. H. Holmes inquired, in what respect the black bees wintered best? Answered that the Italians died while the black bees lived. The Secretary's experience had been different; the Italian bees wintered best.

Adjourned till 1.30 p. m.

At the opening of the afternoon session, a report from those present was called for by the President, and much interesting information obtained, which is condensed in the following table:

NAMES.	No. colonies, fall, 1882.	Colo. spring, 1883.	Colo. fall, 1883.	Lbs of comb honey in 1883.
H. B. Isham....		10	19	*
E. P. Wolcott..	61	60	89	7,000
Dr. F. Bond....	83	14	21	†
F. B. Sumner..	65	43	75	3,300
J. I. Clarke.....	47	42	76	3,000
L.C. Thompson	65	58	150	‡ 5,000
Edson Smith..	67	63	116	4,500
J. D. Brooks...	85	82		5,000
E. L Moody...		5	16	†
J. H. Mead.....	25	15	26	¶ 1,500
V. V. Blackmer	60	27	64	§ 3,000
A. P. Needham	35	15	33*	1,000
Geo. Smith....	65	50	80	4,000
M. Sturdevant		32	65	**
G. C. Wicker...	4	3	6	250
G. S. Brown....	65	37	65	††
V. N. Forbs....	29	19	38	1,200
R. H. Holmes.	8	4	7	200
J. E. Crane....	400	300	438	‡‡ 25,500

* Sold to the value of $151.00.
† Honey for family use.
‡ One colony gave 250 lbs. of honey.
¶ Best yield from one colony, 273 lbs.
§ Also 126 lbs. of extracted honey.
** Honey not reported.
†† Sold $200.00 worth of honey.
‡‡ Also 1,000 lbs. of extracted honey.

While the various reports were being put on paper, the President called on Mr. F. L. Ripley, of Boston, to give any information on the honey trade or marketing, that might be of use or value to honey producers.

Mr. Ripley then read a short hastily-prepared paper on the best methods of putting up honey for the Boston and other New England markets, which was listened to with great interest by all present. During the reading of the paper, he was frequently interrupted with questions, which were answered satisfactorily to all. He said he did not come to represent the firm of Blake & Ripley, of which he was a member, but rather in the interests of the honey trade. He wished to become acquainted with the honey producers of New England, and gave many interesting facts in regard to the best methods of putting up honey for market.

On motion of Dr. Bond, a hearty vote of thanks was given Mr. Ripley for his pleasant and interesting paper. He was also made an honorary member of the Association.

Voted, to give those ladies present who were interested in producing honey, the privilege of becoming members of this Association without paying the usual fee. Several ladies gave their names and became members.

The topic, "The best way to build up weak colonies," was taken up.

G. S. Brown: I have not been successful in doubling weak colonies in spring. I have found it better to take a comb of brood from a strong colony and give it to a weak one.

H. B. Isham: I prefer to let the strong ones alone and take from the weak ones.

Edson Smith: I take two medium colonies and feed them, and then take brood from these to help every weak colony. Other members seemed to prefer doubling weak colonies.

Topic: "How far apart should large apiaries be located?"

J. D. Brooks said he had lined bees for 5 miles, yet he lost many of his bees in crossing Lake Champlain; his apiary being located on the east shore, and the distance across being about ¾ of a mile.

President Leonard thought large apiaries should be located at least 4 miles apart.

Topic: "Which is best, a hive with dead-air space, or one packed with chaff?"

Various views were expressed; the President thought the chaff-packed hives best.

Topic: "What foundation machine is best for working up wax?"

H. B. Isham thought the Given press was the best; had used, the past season, foundation made on Vandervort, Van Deusen, and Dunham mills. He governed the thickness of the foundation by dipping.

R. H. Holmes asked if the wax sheets were not thicker on one side than the other, when dipped but once?

E. L. Moody: I dip three times for heavy foundation.

Mr. Beech asked if the foundation was as good after it had been made some time?

J. I. Clarke: When honey is coming in fast, I think it makes no difference.

H. B. Isham: The age of the wax does not make as much difference as the quality.

J. H. Mead asked what conditions would injure comb foundation?

Dr. Bond thought it should be kept from the air. Others said it should be kept in a dry place.

The last topic taken up: "What advantage have the Cyprian race of bees over other races?

Mr. Isham thought their strongest points were their stings. This seemed to be the experience of all who had had anything to do with them.

The Association then adjourned till the second Thursday in Jan., 1885.

The attendance was good, about 40 persons being present. Some fine sections of honey were on exhibition, also samples of Given foundation and some one-piece sections.

J. E. CRANE, *Sec.*

For the American Bee Journal.

Circular Saws for Hive Making.

W. D. WRIGHT.

In the BEE JOURNAL, page 26, No. 2, Mr. F. M. Reed, of Hindsboro, Ill., asks for information in regard to setting up and running circular saws. As I have had one in use for a number of years, with which I have cut out several hundreds of hives, clamps, etc., perhaps a discription of my arrangement will be of benefit to him.

I have a one-horse railway or endless chain power, standing close alongside of my shop, outside, with the band wheel next to and parallel with the building. A 1⅜ inch steel shaft 10 feet long is supported by three bearings, about one foot from the floor in shop, at right angles with, and with one end projecting through the side of the building, at a suitable distance from the horse power, with a pully on the outer end to receive the belt from the power. On the other end of the shaft is a larger pully from which I run the belt to the saw. I also have a 90 pound balance wheel on this shaft, which serves to partly regulate the speed.

My saw table stands near the centre of the floor that I may have plenty of room to work all around it, and cut up long stuff. The table is about 3 feet wide by 4 feet long, with the top hinged at the back, so that it can be raised or lowered with a hand screw in front, for rabbeting, etc. For cutting hand holes in hives or crates, set the saw wabbling, raise the table until the saw cuts to the proper depth, then raise and lower the table with a lever.

At the right of the saw as it runs towards you (and hinged to the side of the table), is a slitting gauge, which is set with a single thumb screw. At the left of the saw, and 5 or 6 inches from it, is a sliding parallel bar 4 or 5 inches wide, let into the table, flush with the top of the same. Firmly fastened at exact right angles to this bar, is a cross bar, against which the lumber is placed for cutting off. To prevent this cross-bar from getting racked "out of true," fasten a strip across from the back end of the parallel bar to the outer end of the cross-bar, making a figure **4**. On this cross-bar I have an adjustable stop (fastened at any point by a thumb screw), which I use in cutting off short stuff. I also have another parallel bar, 8 or 10 feet long, with several spurs in the upper side, which I use in place of the above for jointing the edges of long pieces.

My mandrel cost $7.50, but the same can now be purchased for $5.00. It is ¾ inches in diameter, and is large enough for 6 or 8-inch saws.

Against the side of the shop, I have a cord connecting with the break on the power, by means of which it can be quickly put on or off. With a horse that understands his business, I can saw one-half day without looking to the horse at all. I also have a break on the large pully on the shaft, regulated by a treadle in front of the saw table, with which I control the power, when cutting off lumber, which requires much less than ripping. I can also stop the power with this break if desired.

I get my lumber dressed on both sides.the thickness that I wish, at the lumber yard. In cutting it up, to make it more convenient to handle, I cut a board in two or three pieces, of proper length to cut a certain number of short pieces. I then straighten one edge of all of these pieces, by pressing them down on the spurs in the long bar, so that the saw will just nicely trim them. Now we have a straight edge to work from, they may next be ripped to the right width, and then cut up in lengths by placing them against the stop on the cross-bar, or they may be cut up first and ripped to the proper width afterwards, which I usually do with wide stuff. In sawing stuff for brood frames, I cut it all up in lengths first, then rip up in slats.

I once tried to cut up a lot of 2-inch plank for sections, but found the power insufficient for ripping stuff of that thickness to advantage. No doubt a two-horse power wonld answer the purpose, but as it requires expensive machinery to manufacture the best dovetailed sections, I prefer to purchase them in the flat of some reliable dealer.

After setting up your machinery to suit you, if the saws run the wrong way, cross one of the belts, which will reverse the motion. To do good work, good sharp tools must be employed, the saws must be well filed, set and jointed. The Simons' saws are the best with which I am acquainted. I have never used the hollow ground saws for cross-cutting, but think they would be best for that. purpose, as they require no set, and cut very smoothly. They also cut smoothly in ripping, but very slowly. The saw that has given me the best satisfaction for light ripping is 6 inches in diameter, No. 20 gauge, 2½ points to the inch, and just enough "set" to run freely. However,this saw is too thin to joint the edges of boards, as it will spring if crowded much. Cross-cut saws for fine work should have 5 or 6 points to the inch, No. 17 or 18 gauge, or if beveled, No. 18 gauge at centre, and No. 15 or 16 gauge at circumference. If preferred they may be made thiner than this, but are more apt to spring if crowded.

If new leather belting is used, it should be well covered with castor oil, and allowed 24 hours before using to penetrate, else the greasiness will cause it to slip. Thus treated it will be much more efficient, last much longer, always remain flexible, and will not crack. Also if the grain side is placed to the pully it will drive one-third more than the flesh side, because it is less porous, thus admitting less air between the surfaces.

The proper speed for circular saws is given at 6,000 to 7,000 feet at periphery per minute. Mine make about 5,000 feet per minute, with good results. The diameter of band wheel on my power is 42 inches. Pully on outer end of shaft, 10 inches. Pully at inner end of shaft, 16 inches, and pully on saw mandrel, 2½ inches.

Knowersville, N. Y., Jan. 15, 1884.

For the American Bee Journal.

Calling Things by their right Names.

DR. G. L. TINKER.

On pages 603 and 604 of the BEE JOURNAL for 1883, the editor gives a valuable glossary of the modern terms used in apiculture. It seems to me that a glossary of terms should be added as an appendix to every standard work on bee-keeping. It would add much to their worth, and be a ready means of reference.

Many more terms could be added, particularly those relating to the different sizes of movable frames, as the Langstroth, Gallup, Simplicity, etc. The description should give the exact size, the length, width, and thickness of the top-bars and the originator. Then the simple mention of the Simplicity frame would mean a size 17⅝x 9⅛, with a top-bar 19⅛ inches long, ⅞ wide, and 5-16 thick. The Langstroth frame would mean a size 17⅜x9⅛, with a top-bar 19⅛ inches long, 1 inch wide, and ⅜ thick. Now these are very important matters with those ordering hives from manufacturers. In other words, there seems to be a greater need of some standard in the matter of exact measurement, than there is of a standard frame. And if all movable frames were properly described in our standard works, it would save much confusion and trouble.

The difference of size between the standard Langstroth and the Simplicity frame, is not very great, it is true; but it is sufficient, in my estimation, to require a hive especially constructed for each; and hence, they differ as much in this respect as the Langstroth from the Gallup frame.

For one, I shall hope that all bee-keepers may hereafter agree to make the distinction that justice demands, by calling the size 17⅜x9⅛, only after its distinguished inventor, and every other size of frame after the originator, or after the name of the hive in which it is used.

Again, as the broad-frame system of obtaining surplus seems to be quite generally disliked by those bee-keepers who have had the most experience in its use, we may conclude that the time is not far distant when broad section frames will cease to be used by practical bee-keepers altogether.

Since there will be no occasion after a time for a variation in the original measurements given of the Langstroth frame, on account of the size of a section, would it not be advisable for all bee-keepers who like the long shallow frame, to make in the future only the standard Langstroth frame? It seems to me that all bee-keepers will do themselves honor by commemorating in this one size of frame, the name of the Rev. L. L. Langstroth.

In regard to the use of the word "dysentery," I have always thought it to be improper. The terms "bee dysentery," would imply on inflammatory condition, of which there is no evidence. The words "bee diarrhœa" are undoubtedly the most proper, and if all bee-keepers would try to remember them, we would soon hear no more about bee "dysentery."

New Philadelphia, O.

For the American Bee Journal.

Is Bee-Culture Profitable?

JOHN NEBEL.

I have translated the following from *Welt Bote*, a German paper published in Allentown, Pa.:

This occasionally puzzles some persons who live in a favorable locality. They derive a nice profit from bees that they kept during a good season. The rumor of it is spread far and wide, and encourage many others to commence keeping bees. A few persons in this country have succeeded by their shrewdness to accumulate considerable wealth. Usually have they adopted with honey raising the breeding and selling of imported bees, and occasionally have sold a few hives and implements to bee-keepers.

Experience teaches that most of these persons engaged in the business lose time and money. The cause does not likely lay in the business itself as much as it does in the men that manage it. Some are not satisfied with a small profit; they want to accumulate wealth by it, the same as they have read that others have done. Many commencing the business without any knowledge and without learning from books or from experienced persons. They have heard that bees are intelligent and industrious insects, and presuming also that they can with surety live there alone, and gather honey and take care of themselves, trusting to the little creatures' ability and wisdom. When the weather is warm the hives are molested with moths, and during winter the cold weather seriously injure the inhabitants of those hives.

At the close of the first year they have harvested a large amount of experience, but is not salable. There are plenty of books written with sweet matter from the blessed bees, and they have done much to stimulate the desire for practical experiments. Those who want to save the costly learning of experience, will do better if they first carefully consider the advise of some practical bee-keeper, and then commence with small experiments.

High Hill, Mo., Jan. 14, 1884.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

For the American Bee Journal.

Essays at Conventions.

W. Z. HUTCHINSON.

I have been opposed to the reading of essays at conventions, and in regard to the prosy, exhaustive, half-hour-essays that are sometimes read, I am of the same opinion still; but after attending a few conventions, I do think that essays can be made beneficial.

In my opinion, their primary object should be that of introducing topics, and not that of treating subjects exhaustively; hence, they should be short, sharp, concise, right to the point, of a character that will arouse discussions, and not more than ten minutes long—five would be better.

When a subject is announced for discussion, many times no one wishes to be the first to speak, one waits for another, and the slow, spiritless manner in which the discussion starts off, throws a gloomy, depressing feeling over the whole assembly, and it is some time before the enthusiasm with which the preceding question was dropped is again revived. Before the discussion of each topic let there be read a short, crispy, sparkling, lively, spicy, pungent essay, written by some one who has made a "hobby" of the subject, and thus knows how to handle it, and before the reader has scarcely made his final bow, half a dozen or more will be on their feet exclaiming: "Mr. President," and the discussion starts off with a "boom," and with so much enthusiasm that it is sometimes difficult to stop it in time for the next topic.

I say, let us have essays at conventions, provided that we can have them pithy, pertinent and brief—especially brief.

Rogersville, Mich., Dec. 22, 1883.

[Mr. Hutchinson is quite right. Such essays as he proposes are just what are wanted, but the long ones are killing to the enthusiasm of a convention.—ED.]

Maine Bee-Keepers' Convention.

☞ The annual meeting of the Maine Bee-Keepers' Association will be held at Small City Hall, Lewiston, Feb. 14 and 15, 1884. The meeting will open at 1 o'clock, Thursday p. m. The afternoon will be devoted to the President's address, reports of the Secretary, Treasurer, Vice-Presidents of different counties, and all committees. A session will be held Thursday evening for essays and discussions. Friday morning election of officers. Friday afternoon essays and discussions. The Western Maine Bee-Keepers' Association will also meet at the same time and place. The Maine Central railroad will grant free return tickets to all paying full fare one way. Let there be a full attendance, and a good display of apiarian implements.

WM. HOYT, *Sec.*

What and How.

ANSWERS BY

Jamse Heddon, Dowagiac, Mich.

☞ I wish to say to W. C., of N. H., that his questions regarding my hive, etc., being relative to my own private business, and not of general interest, are out of place for this department. Once more, I wish to impress it upon your minds, that the questions are to be sent to the editor, and not to me.

J. H.

Honey Granulation.

Reading an article on Granulated Honey, in the Bee Journal, giving reasons why pure honey granulates, I have a question to solve. We have honey taken during the last honey season, some in barrels and some in 5 gallon kegs. The honey has all been kept in the same room; that in the barrels has granulated, and is as clear and beautiful as any I ever saw, while that in the kegs has not granulated a particle, and seems as pure as can be. Now why this difference?

Mrs. J. W. Knadler.

Valley Sta., Ky., Jan. 14, 1884.

If the honey is all from the same kind of blossoms, I can think of no reason for the different action, unless the wood of the kegs contained some powerful acids. Honey from different plants and trees differs much in its tendency to granulate.

Frost-Proof House.

1. Will a house be frost-proof that is covered inside and outside with tarred paper, and boaded over on the outside?

2. Would tarred paper have any effect on the honey? I want some place to keep honey in, that will not be too expensive.

G. Drew.

Bunker Hill. Ill., Jan.. 19, 1884.

1. Certainly not, if there is no heat produced within. If the walls were 10 feet thick, and alternated with sawdust, charcoal, chaff, and dead-air space walls, and closed tight at a temperature of °100, and then the outer temperature reduced to zero, and held there, it would be only a question of time, when the temperature of the inner-room would also stand at zero. No wall can be made perfectly non-conducting, and those that are made partially so, are made to retard the radiation of some heat continually produced within. A cellar receives its heat from the warmer earth which surrounds it. It is a good place to keep honey (if clean), as long as the temperature within is above that without; but when below, dampness will injure the honey at once.

2. No, not after it had been exposed to the air for a time.

Feeding Bees.

What is the best way to feed bees in the fall and spring, so as to avoid disturbance and drowning of bees?

John Tye.

Toronto. Ont., Jan. 16, 1884.

I use three different styles of feeders, with which I feed liquid food, diluted honey or sugar syrup. One is made for feeding small quantities; another large quantities; another for feeding in cold weather when it is difficult for the bees to move about. They all work on the same principle, and are constructed so as to prevent robbing, daubing or drowning, leaking, loss of heat from the hive, or the necessity of coming in contact with the bees, when filling or re-filling the feeder.

Wax and Comb.

1. In a given number of pounds of empty comb, what amount of wax could be obtained, the comb to be free from pollen?

2. Will it pay to take straight combs which are dark and heavy and melt them to make foundation?

3. By so doing how many sheets of foundation, suitable for brood-chamber, would comb of the same length and width make?

W. Fisher.

Hamler, O., Jan. 16, 1884.

1. I could not say. I think that a comb will make wax enough to make foundation enough to a little more than equal the size of the comb. I have not experimented with this point.

2. By no means; if they are not objectionable on account of having too much drone comb.

3. Answered above.

Wires or no Wires in Foundation.

Which do you consider the most desirable way to use comb foundation, to get it wired, wire the frames or use it without wire? I have never used any wired; have always had success using it without wire, but if there is a better way, I want it. How long would it take to wire 100 frames and prepare foundation into them? How would you make the holes in the frames? What is the comparative cost of different ways?

John Crawford.

Pleasant, Ind.

I consider it best to wire the frame, and put the foundation on to the wires afterward. The "success" of one bee-keeper would not be considered so by another, and so the term conveys but little meaning. Many have changed from no wires to wires. None have reported a change the other way. A girl or boy of 12 years will wire 100 frames in 3 or 4 hours. It will take a little longer and an older hand to put in the sheets of foundation by hand. We bore our frames with a special machine made for boring, and run by steam power. The wire costs about ½ cent per frame, and now you can estimate the whole cost—much depending upon local circumstances.

Locating an Apiary.

Will Mr. Heddon please give in the Bee Journal an explanation, or something approaching one, of the paragraps on page 177 (front page) of the Kansas *Bee-Keeper* for December, 1883, relative to "How to locate and control an apicultural field." Thanks for reply as to Italianizing; also, some time, please make it a little more clear how you do to teach bee-keepers near you "that two persons cannot successfully produce honey in the same field." I always thought this depended on the honey supply and flowers in the locality. There are a dozen in and near Austin. When I make bee-keeping my profession, and go out from political life, of course I shall move into the country.

R. J. Kendall.

Austin, Texas Jan. 15, 1884.

This question suggests almost too long an answer for this department, but, as I think it is one of vital importance to successful producers, I will write an article on it for next week's Bee Journal.

Local Convention Directory.

1884. *Time and place of Meeting.*

Jan. 28.—Bee-Keepers' meeting at Monee, Ills.
A. Wicherts, W. Cossens, B. Heyen, Com.

Feb. 2.—Marshall Co., Iowa, at Le Grand.
J. W. Sanders, Sec.

Feb. 14, 15.—Maine State, at Lewiston, Me.
Wm. Hoyt, Sec.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

☞ Our friends will find this the season for securing subscriptions. We offer the premiums and they can easily secure them.

SELECTIONS FROM OUR LETTER BOX

Extremely Cold in the South.

I put into winter quarters 60 colonies of bees in good condition. Since January the weather has been very cold for this latitude, in fact the coldest ever known; the thermometer reaching 30° below zero on Jan. 5, and this in "Dixie's Land." Last season the honey crop was short; the season previous, we had an immense yield. I have no trouble to dispose of my honey crop at home at 15 cents per pound for extracted.

LEE EMRICK.

Lone Tree, Mo., Jan. 18, 1884.

Honey Production in Northern Wis.

We have a splendid location for honey production—a good many unoccupied fields for the coming bee-keepers. The market is the best in this country. We have not produced honey enough to supply our local market. We are within easy shipping distance (60 miles) of St. Paul and Minneapolis, and there the great prairie wheat raising country commences, and extends throughout Minnesota and Dakota, in which bees cannot be kept profitably. This region is becoming thickly settled with many large and prosperous towns that must draw their supplies of honey from the above-named cities. What is needed is a little capital, and skilled bee-keepers to gather the tons of white clover and basswood honey that go to waste annually, with a market that will take every pound that can be produced for years to come. We are making a speciality of honey production, and are doing well. I will cheerfully answer correspondents among the readers of the BEE JOURNAL, who are in search of good locations for bee-keeping.

A. A. DECKER.

Boyceville, Wis., Jan. 17, 1884.

Feeding Bees in Winter.

We are having some cold weather, 36° below zero on Jan. 4 and 5; 26° this morning. Bees are generally housed through this section, and are all right, as far as heard from; except a few are reported light in stores. I raised the quilts and gave my colonies some sugar candy as directed in the book, "Bees and Honey." They take right hold of it, and I do not see why they will not do well on it. They all seem in prime condition, except a little light in stores. I have the brood nest contracted with division-boards, which I find a great help. The temperature of my cellar has been from 34° to 40°, but it is dry and pure from this on. I shall try and keep it from 40° to 45°. I will report how my candy feeding succeeds in the future. I find the work, "Bees and Honey," a library in itself, and very handy to every bee-keeper. J. W. SANDERS.

Le Grand, Iowa, Jan. 24, 1884.

Steady Cold Weather.

I have 3 thermometers, and all agree that the following were the degrees below zero, from Jan. 2 to 11, inclusive: 15, 22, 31, 33, 34, 15, 27, 4, 6, 26. How is that for cold?

C. W. DAYTON.

Bradford, Iowa, Jan. 15, 1884.

Sweet Home Apiary.

I commenced the season with 27 colonies; increased to 45, and 3 swarms went to the woods or somewhere else. I gave up the chase. My yield is 600 lbs. of comb honey in one and two-pound sections. I sold all my honey at 20 cents per pound. This has been a poor season here. Too much rain in the spring, and in the latter part of the summer and early fall, too cold and dry. There was no fall honey for the bee-keeper, and hardly enough for the bees to keep them until spring. I have been feeding some late swarms. I use the Langstroth hive, winter on the summer stands, and increase by natural swarming. I get my bees all ready for winter by Oct. 1, pack them over the frames with dry planer sawdust, and leave the entrances all open during the winter. This is the way I prepared them last winter, and I only lost one, and that one where the entrance was frozen shut, and the bees smothered. I now bore a ½ inch hole over the entrance, so, in case the entrance freezes up, they may get air through the ½ inch hole above.

JOHN REY.

East Saginaw, Mich., Jan. 18, 1884.

Cold in Alabama.

The weather for 8 days has been cold here. It has been 4° below zero 800 or 900 feet below our apiary. We have lost 15 colonies of bees in this cold snap. The ice has been flowing down the Tennessee river 3 or 4 days. Bees are flying now. T. S. HALL.

Kirby's Creek, Ala., Jan. 14, 1888.

Regular Blizzard.

It was 22° below zero here on the morning of the 6th, and it is 18° this morning. We have had a blizzard for a week. W. H. SHIRLEY.

Glenwood, Mich., Jan. 7, 1884.

Packing Comb Honey for Shipment.

Allow me to make another suggestion with regard to packing sections of comb honey in cases for shipment. By placing a sheet of stiff manilla paper between each row of sections, so that if any comb should break loose from the frame, it cannot fall against the next comb nor get out of place. I discovered this in overhauling cases, which, on arrival, showed some broken combs, and I found by straightening them up and placing the paper between them, I was enabled to save a great many that otherwise would have to be removed and put in pails and sold as broken honey. The adoption of this plan, and the use of the paper pan in the bottom of the case, together with the marking of the cases, "This side up with care," with large plain stencil, will insure almost absolute safety in shipping. My "Honey Depot" is becoming one of the institutions of this city.

JEROME TWICHELL.

Kansas City, Mo., Jan. 23, 1884.

Glucose in Honey.

Does not Prof. Preston get things a little mixed in his contribution on page 36, about detecting glucose in honey? His method is the usual one for testing glucose in cane sugar; but I agree with him exactly in his closing sentence, where he says "that this test does not enable us to detect the adulteration of honey by manufactured glucose. I would add that this last remark ought also to be applied to the tests given by Prof. Marsh on page 377 of Vol. XIX. They might answer for the glucose which he had at that time, but the glucose offered for sale in New York, as far as I can find, and largely used for adulterating honey, contains no free sulphuric acid nor calcic sulphate. The grocers in all the larger towns in this region keep the spurious honey, which the polaroscope shows to be largely "manufactured glucose," but yet they would "yield no sign" to Prof. Marsh's tests. I believe the only test available and useful to the public generally, is the "candying" test. Anything claiming to be honey, which granulates, is, without much doubt, pure; and that which will not granulate, when exposed to cold and moisture, is 99 times out of 100 adulterated.

J. HASBROUCK.

Bound Brook, N. J.

How I Prepare Bees for Winter.

I began last season with 108 colonies; increased to 198; got 4,000 lbs. of section box honey and 9,000 lbs. of extracted. So you can see I have not been idle, to say nothing of my other business. We had a splendid crop of white clover, but it was very wet and cold during the early part of the season; very little fall honey gathered. We have had very cold weather; the mercury dancing around zero, and down to 28° below; 3° below this morning. I have most of my bees stored in the bee house. I am wintering 75 colonies on the summer stands. They are in two-story hives; the upper story is full of empty combs. I took off the enameled cloth and laid several thicknesses of newspapers over the frames, then the cloth over all, pressing down the cover so as to cut off all upward ventilation. I wintered 20 colonies the same way last wintes, and they came through in good condition. I think it is as good, if not better, than to fill the upper story with chaff or other packing; the moisture that will rise from the cluster will be absorbed by the paper, and if frost should accumulate on the paper at the top of the hive, it will be away from the bees. In preparing bees in this way, it is essential that the bees are clustered in the lower story, as they could not get down to the stores in cold weather. I will report the result. J. M. VALENTINE.

Carlinville, Ill., Jan. 24, 1884.

"No Loss in Wintering Bees."

Many bee-keepers report "no loss in wintering bees." On the first day of March following the winter of 1880-81, our bees flew from every hive and gathered pollen. Did we not winter our bees successfully? On the first of May we had one very large colony, and if all the remnants scattered here and there through the apiary had been put together, they would not have made another. We all are prone to report success, and dislike to report loss. It is so easy to write "wintered successfully," but hard, "lost all or nearly so during March and April." MRS. L. HARRISON.

Peoria, Ill.

The Main Cause of Disease.

In the article of H. V. Train, page 10 of the current volume, he says: "I do not believe that pollen has any thing to do with bee dysentery *pro* or *con*;" and, again, "clover honey is safe stores because it is gathered early in the season and gets well ripened." The latter may be true, but I would ask him to explain the following: In the summer of 1878 we had a flood of white clover honey, and none was taken from the brood-chambers, and that was the stock of the following winter's supply, in which we lost 56 out of 68 colonies, and nearly every one by dysentery. I would further ask Mr. Train, or any other bee-keeper who reads this, if he has ever known a case of malignant dysentery in bees where there was no pollen in the hive? I have not, and I believe it to be the main cause of the disease.
A. A. FRADENBURG.

Port Washington, O., Jan. 21, 1884.

Bees on the Summer Stands.

I have 19 colonies of Italian bees packed on the summer stands, in American and box hives of 3 different kinds. I have been looking over the various hives intending to transfer them all to one kind of hive, and have bought a lot of Dr. Tinker, which, I think, the best I have seen, both as to workmanship and ease of operation. I am always glad when Thursday comes to get my BEE JOURNAL.
CHAS. B. WILSON.

Edmore, Mich., Jan. 20, 1884.

Value of Comb Foundation.

I thought of trying to do without the JOURNAL one year, as I receive a monthly bee paper, and my labor with a correspondence for several weekly newspapers takes up so much of my time; but one week it did not come, and it was so missed that my subscription is herewith enclosed for another year. I put 60 colonies away under fodder the last week in December, and left 36 on their summer stands, in double-walled hives. On the 13th inst. they had a flight, and I was enabled to lift all hives with loose bottom-boards, and clean off the dead bees and litter. I was struck with the fact that where the entrance was underneath, and through the bottom-board there were fewer dead bees and accumulated moisture, ice, etc., than where the entrance was in front. By setting swarms, hived on empty frames, by the side of those hived on frames partly or wholly filled with foundation, the results left no doubt in my mind as to the value of foundation; but when we have as many or more bees than we need, I am not sure but what we can utilize them in the manufacture of wax better than in any other way; at least while wax is so scarce, and getting scarcer. I shall try it the next season by putting brood chambers, containing empty frames, under each full hive before swarming time. If anything will prevent swarming, I believe this course will; and after the lower chamber is filled, or nearly so, it will be easy to divide if increase is desired; and if not, extract.
WM. CAMM.

Murrayville, Ill., Jan. 19, 1884.

Bees Buried under the Snow.

It is lonesome work to keep bees without the old BEE JOURNAL. Please put my name on the roll again. Our honey season here was 3 weeks late; the cold rains of spring and early summer, put it back; it was good when it did come. My bees (27 colonies) are now buried in the snow. I have been successful in wintering bees this way; gradually move 5 or 6 together; cover deep with snow and ventilate with a 6-inch stove pipe.
C. SMITH, JR.

Vandalia, Mich., Jan. 21, 1884.

My Report for 1883.

My bees came from the cellar, after their winter repose, in fair condition; but a snow storm with a cold spell of 8 or 10 days weakened them badly, leaving some colonies a mere handful. The soft maples, which had just opened when the bees were first removed from the cellar, were frozen, leaving the bees nothing to do of any account until fruit bloom, which yielded but very little honey on account of the weather. The bees got very little pollen, scarcely enough to keep up brood-rearing up to nearly the time fruit bloom opened. White clover opened fairly, the weather again being unfavorable, it proved to be the source of scarcely any surplus. At this time I found that, out of 62 colonies, only 51 were fit for surplus; the remainder being weak, were used for queen-rearing and improvement of stock. Basswood yielded well, remaining in bloom for the longest space of time ever known by me; but when this closed, the honey season for 1883 was at an end—buckwheat yielding nothing. I have taken 6,200 lbs. of extracted honey, averaging about 121½ lbs. per colony, spring count. I have increased to 118 colonies, which, except 17 or 18, are all fed on sugar syrup. The honey that was extracted to give place for the syrup is not included in the above report. The cellar in which my bees are wintered is too cold, it being at present 36°; last winter it went as low as 32°, and once or twice, 30°; but they seem to winter fairly. The dead bees clogging in the bottom of the hive when they should be on the cellar bottom. I tried the honey kegs, the past season, and I think they are what we have long needed; they are well made, do not leak, require no waxing, and are of very convenient size. Can any one tell of a pure sugar that is free from color of any kind? I have fed sugar for several years; have tried several different brands of the best granulated sugars, and have never yet found any that would not, when melted with water, produce a blue scum on top. Last fall I skimmed most of it; this fall I have not. A friend suggests confectioners' A, but this has the bluing, or at least that kept here has.
A. A. E. WILBER.

Moravia, N. Y., Jan. 13, 1884.

Extracted Honey.

My hobby has always been comb honey; but last season I thought I would see what I could do with extracted honey, and the first thing I did was to get one of Mr. Dadant's pamphlets on extracted honey. I sent for pint and quart Mason's fruit cans and filled them with white clover and basswood honey. Then I labeled them, telling people that the candying was a positive proof of its purity. Now, for the result. Up to this date, I have sold 1,800 lbs. of extracted honey, and the most of it was candied. In fact, I can now hardly sell liquid honey. I found that the pint fruit cans sold about 3 to 1 of the quart size; another proof that small packages are demanded by the people. I know some who bought the small cans just for the cans, to can fruit in them, and in that way my honey found its way where it would not, if it had been put up in packages that were of no use when the honey was used. I am looking for a large trade next season, if I have the honey. Number of colonies, 167; 6 years a specialist. W. H. SHIRLEY.

Glenwood, Mich., Jan. 14, 1884.

Some Honey Not Candied Yet.

My last communication was about the time when every prospect seemed favorable for a heavy crop of honey. These prospects were partly blasted by continued cold and wet weather during white clover and a part of blue thistle bloom. The honey obtained was of fine quality. I have a few 2 quart jars and ½ pint tumblers of extracted honey which a zero freeze has failed to granulate. I know it is pure honey. The winter here has, we think, been severe, but not so regularly cold as to prevent the bees from flying now and then. On Monday last, they had a good flight, but since then a blizzard struck us, sending the mercury 10° below zero, which is the lowest point touched this winter. I trust I shall be able to send you a good report for the coming season. So far every colony responds to the tap. They are not all packed with chaff, but have chaff cushions on top of the brood frames, with space between the cushions and the top of the frames. J. W. CARTER.

Pleasant Dale, W. Va., Jan. 18, 1884.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

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While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

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Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Price Lists for 1884.—The following are received:

Paul L. Viallon, Bayou Goula, La.—8 pages—"Apiarian Implements and Italian Bees and Queens."

Emil Kratz, Hochheim-Erfurt, Germany—32 pages—"Garden and Field Seeds."

Cole & Brothers, Pella, Iowa—40 pages—"Flower and Garden Seeds."

U. E. Dodge, Fredonia, N. Y.—1 page—"Bees, Queens and Bee-Keepers' Supplies."

◆

☞ The Marshall County Bee-Keepers' Association will meet at the Court House in Marshalltown, Iowa, on Saturday, Feb. 2, 1884, at 10:30 a. m. Subject for discussion: "Promotion of Bee-Keeping." All are invited. Our meeting, which was to have been held on Jan. 6, owing to the cold weather, failed. It was 36° to 40° below zero, and that is a little too cold for a bee-keeper's meeting. As we aim to have a meeting once in three months, we will try it again on Feb. 2, and we hope all, who may see this notice living within our limits, will try it again, for we expect to have a good meeting.

J. W. SANDERS, *Sec.*
Le Grand, Iowa.

◆

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

◆

NO MORE ORDERS WANTED.

I wish to give notice to all bee-keepers that I cannot accept any more orders for Sections this season, as I already have all the orders on my book that I can fill before the honey season commences. I will here say, that I am preparing to build "at once" a larger factory, in which I intend to use steam-power, and expect by another season to be able to fill all orders promptly, by the aid of more and improved machinery. I shall be able to turn off four times the amount of work I ever have before.

Respectfully, A. E. MANUM.
Bristol, Vt., Jan. 21, 1884.

◆

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

◆

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

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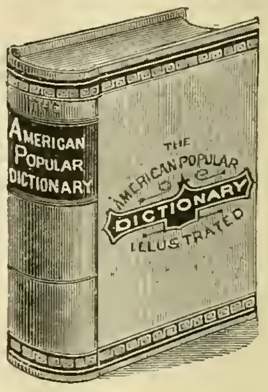
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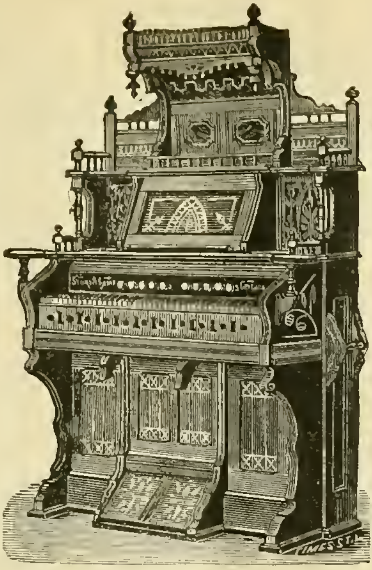

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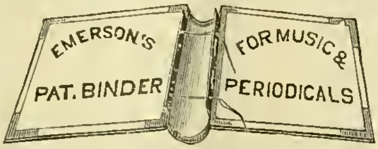

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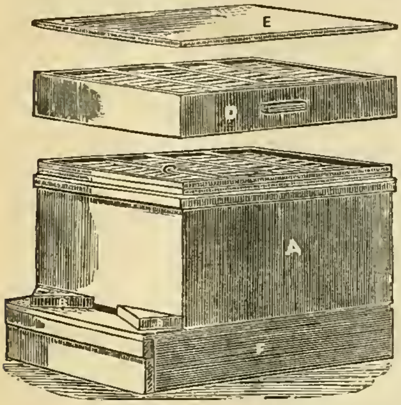

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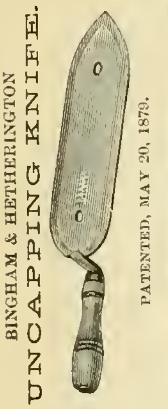
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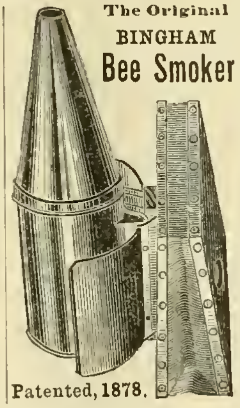

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Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände —Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern—Schwärmen—Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

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THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., FFBRARY 6, 1884. No. 6.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Report of the National Society.

In reference to the "African in the wood pile," about this Report, mentioned on page 51, the following have come to hand from Dr. Miller, the present Secretary of that Society:

FRIEND NEWMAN:—On page 51, Jan. 23, of the BEE JOURNAL, in the article on "Toronto Convention Report," you say: "Perhaps the Secretary can explain it satisfactorily to our correspondent." As stated by Mr. Morhous, the motion was passed to have the minutes published in pamphlet form, and, if I am correct, the old officers elected in 1882 were made a committee to get up the report; at any rate I know that the matter was left in such shape that the present Secretary has nothing to do with it. A stenographer was present in the employ of Mr. McPherson (a nephew of D. A. Jones), and I think he took a full account of the whole proceedings. This stenographic report was, of course, the private property of Mr. McPherson, but I think it was the expectation that it would be used in publishing the pamphlet, paying for the expense of the same or otherwise. I am much mistaken in my impression of Mr. McPherson, if he had anything but the most honorable motives in the matter.

It certainly seems to me we ought to have the report by this time, or hear why we do not have it. Here is a chance for one of those things that we all so much delight in—a personal quarrel—so I pitch into Secretary Root, with all the venom I can command, and demand "Brother Root; where's that report? Get up, quick, and explain." C. C. MILLER,
Sec'y. N. A. B. K. Society.

The following is Mr. A. I. Root's explanation of the matter:

FRIEND MILLER:—I do not know of any one in the world, that would afford me much more pleasure to have a quarrel with than yourself; but I do not believe there is a very good chance now, because, while I think of it, did you ever hear of the woman that did not want to lend her tub? She said it was broke, leaked, and was full of water; besides all that, she hadn't any and wanted to use it herself. Now, I did not have anything to do with the report, besides I told them when they wanted to put me in as Secretary, that I wouldn't make a good one; and, since you mention it, I remember that somebody else asked about this report, and I wrote to our good friend, D. A. Jones, in regard to it, and he told me all how it was; but I sent the letter to the man who inquired, and now have forgotten his name. If I should undertake to tell it from memory, I might make so many blunders that there would be a chance for more quarrels. However, I will try: A reporter was employed, and a right smart man he was, because I sat beside him. Well, friend Jones said he took the job for so much; but after he got done, he wanted about three times as much as the agreed price before he would give it up. As the trade was a personal one between Mr. McPherson and the reporter, the former gentleman decided to let him keep the report, that he might enjoy it all alone by himself. Now, if I havn't told it right, we will let friend Jones correct it.

FRIEND NEWMAN:—You can publish any or all of the above as you see fit. I do not think there is any danger of any "bitterness" anywhere, do you? A. I. ROOT.

Certainly not. The Association did not pay for any report, and have no claim on private parties for their's. But here is another trouble, about the list of Vice-Presidents for the different States.

WHO ARE THE VICE PRESIDENTS?

Is it not about time to let us know who are the vice-presidents of the North American Bee-Keepers' Society? In the BEE JOURNAL for 1883, page 475, 2d column, 33d line from below, I read: "A list of vice-presidents for the several States and Provinces was also made up." That is all I have seen about the matter. *Gleanings* did not give the list either. Having lately had a letter calling on me in my (former) capacity as vice-president, I should like to know if I was re-elected or not, and also who the other vice-presidents are?

WM. MUTH-RASMUSSEN.
Independence, Cal., Jan. 21, 1884.

The Secretary is invited to further explain. This is no doubt a matter which he will be able to clear up quite easily—but at any rate give us the list of Vice-Presidents.

The Conventions of New York.

We regret to learn that the two bee conventions lately held in the State of New York were not of the most pacific character.

At the Albany convention of last year Mr. Tennant led that body into egregious blunders, by his war upon the BEE JOURNAL and its editor, as was shown on page 125 of this JOURNAL for 1883. This year having failed to control the convention, he resigned his office and withdrew in high dudgeon, as will be noticed on page 85.

At Syracuse, an attack on Mr. A. I. Root and *Gleanings* was indulged in, and the daily papers, thinking it a nice bit of sensational news, "dished it up in good style." The "newsboys" caught the "cue," and we are informed that they were heard calling out, as an inducement for bee men and others to buy the papers, that it contained news about how "poor bee men were swindled out of thousands of dollars by a man in Ohio."

If these things are so, they are to be deplored; they bring discredit upon bee-keeping and injure the pursuit. How much better it would be to study to create harmony rather than discord. "Let brotherly love continue," is good advice.

☞ We have received a Catalogue of Percheron Horses, for 1884, imported and bred by M. W. Dunham, at the Oakland Farm, Wayne, Ill. It is elegantly illustrated, and contains about 140 pages. Those interested should send for it.

☞ These new Price Lists are received: Henry Cripe, North Manchester, Ind.; G. F. Williams, New Philadelphia, O.; Smith & Smith, Columbus, Wis.; Dr. G. W. Young, Lexington, Mo.; Ellwanger & Barry, (seeds) Rochester, N. Y.

CORRESPONDENCE.

For the American Bee Journal.

Michigan State Fair Premium List for Bees and Honey.

W. Z. HUTCHINSON.

Jan. 14, 1884, the Executive Board of the Michigan State Agricultural Society held its annual business meeting at the Russell House in Detroit. Mr. H. D. Cutting and myself as representatives of the Michigan State Bee-Keepers' Association, put in an appearance at the same time and place. From the mass of correspondence and other premium lists in our possession, we "evolved" a list that we thought best; the aggregate amount of premiums being exactly $300.

There appears to be a disposition upon the part of the fair managers to discontinue offering premiums upon machinery and manufactured goods. The manufacturers of this class of exhibits bringing them to the fair simply for advertising purposes, and the officers of the society consider that, if they allow space for exhibits of this character, they are sufficiently generous without offering any premiums, and it was only by placing the amounts very low upon "apiarian implements," and assuring the premium list committee that, as a general thing, the manufacturers of these implements did not exhibit them, that they were brought there by the keepers themselves for the purpose of enlightening the public in regard to the improved methods now in use in scientific bee-culture, that they were not stricken from the list.

The officers of the society were much pleased with a project proposed by Mr. Cutting, which was nothing less than the giving away to children, upon "childrens' day," of 1,000 5-cent packages of extracted honey labeled as follows: "Compliments of the Michigan State Bee-Keepers' Association." Mr. Cutting and myself devoted considerable time to the discussion of this subject, but did not arrive at any definite conclusion as to how the matter should be managed. Although we did not feel like bearing the whole expense, we were willing to pay at least $5 each towards carrying out the programme, and we thought that, perhaps, the whole amount might be secured by voluntary contribution of either money or honey. I mention this matter more for the purpose of drawing out suggestions than for anything else. It would certainly be a good advertisement for Michigan State Fair (especially the apiarian department) of her Bee-Keepers' Association, and of her honey. It would get into the papers and go all over; other States might adopt it, and the result would be that thousands of children would in this manner receive, perhaps, their first taste of honey, and this taste would be so glowingly described that many parents would, perhaps, buy their first package of honey. Any plan that will increase the consumption of honey should not be slighted.

Now let those who complain of the meager premiums offered in the apiarian department of their State Fair, go to work and prepare such a list as they think best, and then go in person (this important) and ask the premium list committee to adopt it. The demands, or rather the requests, should be moderate and reasonable, and, even though refused, there should be no exhibition of "temper" or even disappointment; but the next fair should witness a fine display, premiums or no premiums, and at the next meeting of the premium-list committee let the petition be again preserveringly but smilingly presented. The State association of bee-keepers should send a delegate to present the matter to the premium-list committee. When a man comes as a representative of a State Association, his requests are usually treated with more consideration than were they simply private requests. But all these things require time, patience and perseverance. It has taken several years of hard work to place Michigan's bee and honey premium where it now is, and now that we have secured this liberal list, let the bee-keepers come forward and make an exhibition next fall that will eclipse all former bee and honey shows. But I have chatted long enough, and I know that you are all auxious to see the list, so here it is:

	1st Prem.	2d Prem.
Best colony Italian bees in movable comb hive	$10 00	$ 5 00
Best colony Syrian bees in movable comb hive	10 00	5 00
Best colony black bees in movable comb hive	10 00	5 00
Largest and best display of full colonies of different races of bees	10 00	5 00

NOTE.—Purity of race and numerical strength shall constitute the competing points; and colonies must be exhibited in such shape as to be readily seen on at least two sides. Bees must not be allowed to fly when visitors are present.

Largest and best collection of queen bees, alive	8 00	5 00
Largest and best display of comb honey	20 00	10 00
Largest and best display of extracted honey	12 00	6 00
Best specimen of comb honey, not less than 20 lbs., quality and manner of putting up for the market to be considered	10 00	5 00
Best specimen of extracted honey, not less than 20 lbs., quality and manner of putting up for the market to be considered	8 00	4 00
Largest and best display of samples of different kinds of honey	10 00	5 00
Best specimen of beeswax, not less than 10 lbs	5 00	3 00
Largest and best display of honey-producing plants, pressed and mounted, or in bloom	10 00	5 00
Largest and best collection of apicultural literature	10 00	5 00
Best bee hive for all purposes	5 00	3 00
Best honey extractor	5 00	3 00
Best comb foundation machine	8 00	4 00
Best specimen of comb foundation	4 00	2 00
Best specimen of comb foundation made on the grounds	5 00	3 00
Best bee smoker	2 00	1 00
Best wax extractor	3 00	2 00
Best honey knife	2 00	1 00
Best section box for comb honey	2 00	1 00
Best queen cage for shipping queens	2 00	1 00
Best queen cage for introducing queens	2 00	1 00
Best bee feeder	2 00	1 00
Best machine for making holes in frames for wiring	2 00	1 00
Largest and best display of apiarian implements	10 00	5 00
Largest, best, and most attractive, interesting and instructive exhibit, all things considered	10 00	6 00

Rogersville, Mich.

For the American Bee Journal.

Test for Purity of Beeswax.

CHAS. DADANT & SON.

FRIEND NEWMAN:—We have just hit upon a very easy plan for testing the purity of wax, and will give it to you: Dilute water and alcohol in a vial about ¾ water and ¼ alcohol. Then take a small piece of wax which you know to be pure (you or any bee-keeper can easily find such), put it in the vial and add alcohol slowly until your mixture is of the same specific weight as the wax. Then the wax will go to the bottom very slowly. Your testing apparatus is now ready. If you have wax with tallow or paraffine, and put it in the mixture, it will remain at the top, its specific gravity being less than that of the mixture. If it contains rosin, on the other hand, it will go to the bottom quickly, being heavier than the mixture.

In testing, you should take care that the sample contains no air, as this would change its specific weight. In testing foundation, therefore, the sample should be thoroughly melted before testing, so as to exclude all air from the inside of the sample.

This test is cheap and conclusive. There may be a small difference from one sample of wax to another, but it is not so as to exclude the clear discovery of paraffine or tallow, which are the worst enemies we have, for purity of wax. We have tested one or two samples which we suspected, and they floated in a manner that proved their impure origin clearly.

As this may be of use to bee-keepers at large, we authorize you to publish the above entirely in the columns of the BEE JOURNAL, and will be glad if it can be of service in preventing the sale of adulterated wax.

Hamilton, Ill.

Eastern New York Convention.

The seventh annual meeting of the Eastern New York Association met in Agricultural Hall, Albany, N. Y., on Jan. 8, 1884. Called to order at 2:30 p. m. President Vrooman, of Seward, N. Y., in the chair. John Aspinwall was elected Secretary, *pro tem.*

The President made some eulogistic remarks relative to the character of the late Secretary, Mr. Theo. Houck, and appointed a committee composed of Messrs. Tennant, Snyder and the Secretary, to prepare suitable resolutions respecting the death of Mr. Houck, to be presented to the association for approval on the afternoon of the 9th.

Twenty-six new members were taken into the association.

Treasurer's report showed $20.98 in the treasury.

The President then read his address.

The election of officers was deferred till the next day.

Mr. Tennant talked at some length on different subjects. He advised more unity in the different associations. That associations should combine together more closely and endeavor to regulate the honey market to some extent, and he wanted to know whether the association thought honey should be consigned or sold "out and out"—also that our Board of Trade should be impressed with the importance of our business.

The President announced the presence of Mr. Betsinger, and he was unanimously elected as honorary member.

Mr. Pierce reported a failure, due, he thought, to wintering in Langstroth frames, out of doors, without chaff packing.

Mr. Garrett reported that his bees working in the early spring on the pine trees, had a great deal of spring dwindling, which, he thinks, was caused by the bees working on the pines.

Mr. Woodward reported, spring count, 72; 4,000 lbs. of comb honey in one-pound sections, and 1,500 lbs. of extracted. Wintered part out doors, and part in the cellar.

Mr. Wright wintered 100 colonies, and saved 75, was disabled with a sore foot. Bees swarmed when no honey was coming in. He wanted to know what good an extractor was to control swarming, when there was no honey to throw out.

The President: Spring count 66; increased to 77; 6,000 lbs. of comb honey, and several pounds of extracted honey.

Mr. Tennant did not believe in stimulative feeding, but thought if bees were wintered well, they needed no feeding. Wintered 166 in one yard, and 120 in another; both lots were wintered in-doors.

The meeting elected Mr. E. W. Philo, Assistant Secretary *pro tem*, and adjourned till 7 p. m.

Called to order by the President. The question was drawn from the "question box" as follows: "How to move bees a short distance, during the working season, with the least loss?"

Messrs. Brown, Garrett and Tennant thought they should be moved a short distance at a time, on a rainy day, and a board put over the front of the hive to cause the bees to mark their new stand.

The President would move the strong colonies and leave the weak ones to receive returning bees.

Mr. Brown would shake the bees up well and get them confused.

Next question: "What is the best time and way to unite nuclei?" The fall was the best time, and have several nuclei in a box, and remove division boards to unite them.

Next question: "What is the best comb foundation?"

The President: Prefers Van Deusen No. 3. Prefers it fresh milled.

Mr. Tennant thinks Van Deusen's flat bottom No. 3; also uses Vandervort, and has used the Dunham.

Mr. Brown believes the Given the best. He has used the Oatman, and several other kinds.

Mr. Green said he has used all kinds but the Given and Oatman, and found fish bone in all of them except the Van Deusen.

Mr. Brown presses his foundation in on wired frames.

Mr. Betsinger thinks it bad policy to put wire in frames and press foundation on it; he thinks wires injurious to brood. Adjourned.

SECOND DAY.

Called to order at 9:45 a. m. President Vrooman in the chair.

A letter from Mr. Geo. W. House, Secretary of the Northeastern Bee-Keepers' Association, was then read, condemning the discussion of adulteration, because it gave it too much publicity, and advising a consolidation of this society and the Northeastern.

A discussion followed, and it was decided that local associations were most beneficial, and the Secretary was appointed a delegate to the Northeastern Association.

Mr. Aspinwall then gave an address on the adulteration of honey.

The officers were all re-elected.

The President appointed Messrs. Pierce, Woodward and Green as a committee to report on exhibits. Adjourned for dinner.

Meeting called to order at 1 p. m.

Mr. W. W. Cary, who was present, was made an honorary member.

The question: "How to prevent adulteration," was then then taken up.

Mr. Tennant said, put all in comb.

Mr. Snyder said, to put extracted into pails under your own name, and warrant it pure.

Mr. Pierce had good success in this way.

Mr. Tennant said laws were enacted, but they did no good; silver gloss syrup was 25 per cent. glucose.

Mr. Betsinger said there were laws against thieving, but little good they they did, unless efforts were made to catch the thief—that we must work together to stop middlemen from tampering with honey.

Mr. Tennant believed we could not get along without middlemen.

Mr. Betsinger said no middlemen dared to adulterate his honey.

The fourth question: "What can we do to benefit our honey market?" was then taken up.

Mr. Tennant thought this a very important question, and that we should take active measures to make higher prices. He also said that he thought honey should be sold outright and not consigned, that commission men were working the price lower and lower every year; that these who bought outright, paid the best price.

Mr. Pierce believed in a home market; he got quick sales.

Mr. Lord thought supply and demand regulated prices. After further discussion it was decided to appoint a committee of three to confer with the different honey houses to try and establish some regularity of prices, and to report to the members of the association by next September.

The President said he would appoint the committee later.

The resolutions of regret at the death of the late Theo. Houck were presented by the committee and accepted by the association. They were as follows:

WHEREAS, We have lost, by death, our late brother and secretary, Theo. Houck.

Resolved, That we deeply regret this loss, and that, in his death, we lose a pleasant companion, an energetic fellow-worker, and an efficient secretary.

Resolved, That these resolutions be forwarded to the family of the deceased with the deep sympathy, and that these resolutions be sent to the several bee papers for publication. Carried.

The next question was: "Which is the most profitable section?"

After long discussion it was agreed by almost a unanimous vote that the two-pound section was the best. The meeting then adjourned for supper.

Called to order at 7:15 by the President. The question: "Which race of bees are the best?" was then taken up; this discussion was very interesting, and occupied a good deal of time. Of the several races, Carniolans, Italians, Holy Lands, hybrids and albinos, the latter were conceeded to be either a sport, or simply pure Italians, but not a different race. The only one who had tried Carniolans was Mr. Aspinwall, and he thought them the best. Quite a number had tried and liked the albinos, as they were gentle and good workers. Hybrids also had been tried, and for business at both ends, were thought unexcelled. Pure Italians, which included albinos, were then noted by the association as the best, in their estimation.

The following questions were then drawn from the box and answered as follows:

1. "What degree of heat is best for cellar wintering?" Between 45° and 55°.
2. "Can straight combs be produced without separators?" No.
3. "Will it pay to make our own foundation, if we have 50 colonies?" Think not.
4. "Is it customary to put printed paper between sheets of foundation, or simply thin manilla paper?" Thin manilla paper.

Adjourned.

THIRD DAY.

Meeting called to order at 9:30; Vice-President Snyder, of Albany, in the chair, the President having been called home the night before.

As soon as the meeting opened Mr. Tennant rose and said that the market question had not been settled to his satisfaction the day before, and moved it be reconsidered. The motion was seconded, and the matter discussed.

Mr. Aspinwall said that the matter had been fully considered yesterday, when there were more members than now.

Mr. Tennant said he had talked with a number, and there was a general feeling for reconsideration, that a committee to confer with the different honey houses was not the thing, but that we should appoint the heads of the different honey houses to confer among themselves.

Mr. Betsinger said they would not agree, in committee, any better than cats and dogs.

After similar remarks by other members, the motion was put and lost, only Mr. Tennant voting in favor of reconsideration.

Mr. Tennant said that he did not believe the association was working for its own good or his, and, therefore, tendered his resignation and withdrew, bidding the members farewell.

Mr. Betsineer said he regretted that a member should withdraw from the association just because his opinion did not happen to coincide with others.

The next question was: "At what age are queens most prolific?" It was generally thought that no definite time could be given, as it depended upon the queen; but after three years, a queen had better be removed.

The committee on the best manner of obtaining statistics of the honey crop for the next year, reported as follows:

The best plan is to have the Secretary confer with each member of the association, requesting him to ascertain the crop in that vicinity, and that members inform the Secretary at their earliest convenience the result. The total should be then at once published in the several bee papers.

The question: "How shall we winter our bees successfully?" was discussed at length. It was finally decided, by a vote, that from a financial point of view, considering the honey consumption when wintered in-doors and out, that cellar wintering was the best for this latitude.

After some routine work, such as naming the second week of next January as the time for the next meeting, and the appointing of the President, Vice-President and Treasurer, as a committee to obtain exhibits for the next meeting, the convention adjourned.

The above is a condensed copy of the minutes of the seventh annual meeting of the Eastern New York Bee-Keepers' Assściation.

JOHN ASPINWALL, *Sec.*

For the American Bee Journal.

Locating and Occupying a Field.

JAMES HEDDON.

We have found by experience, and observing the actions of such apiarists as Adam Grimm, E. J. Oatman, Capt. Hetherington, Chas. Dadant & Son, and numerous other bee-keepers whose success and intelligence command our respect, that there is such a thing as over-stocking an apicultural area. By that term I mean a floral field of a diameter twice as long as the common working range of our honey gatherers. By over-stocking, I mean having more bees in one field or area than the flora of that area will support in such a manner as to give us the greatest aggregate amount of surplus honey that can be realized from the field one year with another.

When we have one field well stocked, and the business therein carried on is paying a satisfactory profit, the law of "advantage, in specialty" imbues the mind of the apiarist with a desire to do more of the same business. His experience tells him that to do so necessitates a change of *modus operandi*. One or more "out apiaries" must be started; horse and wagon, more fences and buildings, and time spent getting from one place to another are all added,to come out of the profits of these after-apiaries.

After all of these extra expenses, these apiaries will not get the careful attention nor yield as great a profit as the "home apiary," more especially as it did when it alone claimed the master's undivided attention. Employes come next, and their main object is of necessity the wages rather than the profits from the production of the bees they attend, unless, perchance, they are working for a share of the profits; a plan I much prefer as the best for both parties. But to sum up: As it is a fact that as you enlarge this business up to the complete occupancy of one field, the profits on capital and labor increase, and after that, on further enlargement, they decrease, we see how important it is that an apiarist should alone enjoy at least one area, and the poverty or riches of the field, change not the principle. The richer the field, the greater the inducement to occupy it, and fully as great the desire will be to occupy it alone.

But how to select and then control an area. Use your best judgment in choosing a rich location; a detail description of which cannot be accurately given to be a suitable guide to bee-keepers located in so many latitudes and longitudes as this JOURNAL visits. In this selection, as in all acts, "do not to others that which you would not that they should do unto you." For the welfare of your pocket and comfort of your conscience, never locate in a field already occupied. Show your brother bee-keepers that any man that will do that is just that much nearer related to the knave or fool than you are. Let us clearly understand the term "occupied." I consider a field occupied when it has in its limits a located bee-keeper who either is or intends as fast as possible to stock it to its capacity. This, and nothing short of it.

Now let us imagine that you have located a field. Let us suppose that a member from the ranks of the mean or mistaken should begin operations in your field. Yours by priority of location. Yours alone, because there are plenty of other unoccupied areas. Now, what shall you do? Be honest, kind and charitable. "Do unto others as ye would that they should do unto you," and use all just and reasonable means to make them do likewise. You have but to tell and act the truth to accomplish your object.

You will say: "Good morning neighbor Jones, how goes the craft?"

"Good morning Mr. Kendall; oh! middling, middling."

"Mr. Jones I think you made a mistake in trying to produce honey in an already occupied field."

"Well, Mr. K., I will give you credit for thoroughly understanding this business, but I know you will forgive me if I tell you my honest opinion, which is, that you are a little selfish in this matter. You think that my few bees working in the same field with yours will cut down your priorate yield, somewhat; at least, that is what "Joe," your hired may, says."

"Well, Jones, I thank you for your frankness and compliment to my ability, and will take you at your word, at least regarding my possessing a thorough knowledge of the principles of *one* feature, over-stocking. Now, Jones, if I dread your 30 colonies, ought you not onght to dread my 200 to an extent that would at once cause you to move yours off to an unoccupied field, the same as I did when I came here? No, Jones, I feel as sorry on your account as on my own, for while I must "get on" a little more slowly, you must fail.

If Mr. Jones cannot see the point sufficiently clear to cease further efforts at growing into successful opposition, he must be like the young dandy who tried to get a No. 8 foot into a "large 5" boot, and need not be feared. Very soon he will propose to sell all out to you, when you can buy at a true cash value. Never pay any more; give no bonus; offer no premiums for another similar wrong. But you say, suppose Jones won't sell, what then? Then this: You know that the more colonies kept in one area the less is the *pro rata* yield. Instead of selling off or starting an out apiary (what is the use to start an out apiary and have the home field divided? This is only a gradual moving out and relinquishing the field to a usurper), start out in the spring with colonies enough to over-stock the field, and reduce the *pro rata* yield to that point that Jones' apiary will not pay. This plan does not harm you as much as Jones. Let us figure. Say you start with 100, and Jones with 30 colonies, and the *pro rata* yield is 50 pounds per colony, you have 5,000 pounds, Jones 1,500 pounds. Suppose you start with 250 colonies and Jones 30 colones, or 280 in all, and the *pro rata* yield is 20 pounds per colony, you have the same amount of surplus as before, and Jones has only 600 pounds, or just two-fifths, and three-fifths nearly all taken from the net profits will kill any business. You furnish a little more capital and work a little harder. If this does not look on paper like a success, take my word for it that it has proven so with me, twice. I will not work against or chide a man for doing that which I will do myself. I will not do that which I will try to prevent others from doing.

Twelve years ago, when I tried to awaken some of these ideas in the minds of my brother bee-keepers, ideas that I felt sure would spring into being as soon as bee-keeping arose to the dignity of a business, a profession, I was laughed at, sneered at,and almost everything was done except to answer my arguments. At that day this article would have been a target, written under protest, forced forward only by the inspiration of neglected truth, smothered facts. Now it comes in response to questions from men who bid fair to rank among the leaders of our business in the near future. I expect the A B C class will wonder. The old producers will generally sanction it. The froth of the profession, those whose interests lie in the sale of such wares as only the beginner can be caught with, will scream the same old scream, "Put him out." But time has added wonderfully to the ranks of the experienced. There are too many of us to "put out" now.

There may be some who are honest and sincere, who have no other interest than that of the producer to bias their judgment, who may wish to take issue with me. With them it will be a pleasure to discuss until we are put to rights, or they are, upon so important a subject; one whose importance and interests are growing so rapidly. With no other class do I care to argue. I wish it to be remembered that at the time above referred to, a time when this business was run by gas to a far greater extent than it is to-day, the Bee Journal was either conservative enough, or philosophical enough, or generous enough, or more likely all combined, under the management of its present editor, to give us a hearing above the multitude; a gift that most of the other bee publications withheld. We shall be slow to forget the debt.

Dowagiac, Mich., Jan. 24, 1884.

For the American Bee Journal.

My Critics.

WM. F. CLARKE.

Early in the New Year I received the following friendly criticism, which, as it contains also a couple of items of bee news, may, perhaps, fitly find a place in the Bee Journal along with an apology for not forwarding it sooner. The apology will be accepted, I know, when I state that I have been in the throes of moving and settling down in a new home, hence, a variety of matters have been either overlooked or postponed:

Mr. Wm. F. Clarke:—In reading your article in the last Bee Journal, it occurred to me that the definition to bee moth should be more explicit. As I understand it, the moth does not eat wax at all, but the larvæ does. The past year has been a very poor one for honey, ¼ of a crop is all. Bees are wintering well, so far.

L. C. Whiting.

East Saginaw, Mich., Jan. 3, 1884.

To the same purport as the above is Mr. Poppleton's criticism on page 43. As editorially remarked in a note at the close of Mr. P.'s communication, "the point is well taken," as to its being the larvæ and not the moth which eats wax, though this was not the "point" that caught my eye, but rather whether "miller" is a strictly and scientifically correct term to use in an apicultural vocabulary. Prof. Cook will, no doubt, be able to settle the point I raised, and I for one shall feel obliged by his doing so.

I am not so sure about the correctness of Prof. Phin's criticisms as to "pollen" and "farina." It is not my good fortune to own "Webster-on-a-bridge," as Mrs. Partington called it, but the dictionary I go by, gives the following definitions: "Pollen, the fecundating dust contained in the anthers of flowers; fine bran." "Pollenarious, consisting of meal." "Farina, the pollen or fine powder contained in the anthers of plants, and which is supposed to fall on the stigma and fructify the plant; the flour of any species of corn or starchy root, such as the potato, etc.

Let us not forget, in our aim to be critical, that it is possible to be hyper-critical, which my dictionary explains to mean, "critical beyond use or reason, excessively exact."

Will my correspondents kindly notice my present residence, and address me accordingly?

Speedside, Ont.

For the American Bee Journal.

Section Racks and Bee Spaces.

M. BRAY.

On page 514 of the Bee Journal for 1883, Mr. T. E. Turner says the racks should be no deeper than the sections, 4¼ inches, and then one tier will set right on another, leaving no space between tiers. I have had, and used this system of no bee-space between and above the boxes. I did not like it, and will give some reasons for not liking it.

1. In tiering up, the killing of bees is unavoidable. With the rack of empty sections in place, one may pick up the rack that is to be raised (it is full of bees, and bees running thickly over the bottom), and attempt to place it on the empty rack, no matter in what way or how gently he may push, he is certain to kill a few bees. If he only catches the bee's foot and keeps pushing, that bee is gone.

2. The cover will be more or less glued to the boxes; in taking it off, we break the glue, with a jar; this excites the bees, and they will soon be running over the top of the boxes. I never could put the cover on without crushing two or three bees; these two or three bees, with a little bee glue, will raise the cover a little and the cover will warp some; this will give a half a chance to the wax moth, and this seems to be all they want.

I find it more work to clean the propolis from the boxes with no bee-space. As well have no bee-space over the brood frames as over the section boxes.

I am now using the Heddon case system, for comb honey, and get along with but little killing of bees, consequently do not get quite so many stings; the boxes come off cleaner than from any other system that I have used.

The honey board is a necessity. Mr. Turner, on page 514 (1883), makes the depth of the Heddon honey-board bee-space ⅜ inch; honey-board, ½ inch; making the whole ⅞ of an inch. The sample sent me was only ⅝ of an inch. I make mine ½ inch, ¼ bee-space; it takes off the brood frames better than one that is more stiff.

My comb honey goes on the market in retail (1 and 3 lbs.) packages. This demands the use of separators. I have made some trifling changes in the Heddon section case, to adapt it to the use of separators. To my mind it is one of the best of separator-systems. I do not claim to have improved it, for Mr. Heddon or any one that can get along without separators. I have no supply business, and no axe to grind.

New Almaden, Cal., Jan. 25, 1884.

For the American Bee Journal.

Comb Honey Reported as being Made Without Aid of the Bees.

C. R. ISHAM.

Not long since I was in the large retail grocery store of Chas. Salmon, Esq., of Rochester, N. Y., talking up the honey trade, its prospects, etc., when handing me a section with contents partly used, he inquired what kind of honey do you call that? I at once told him it was honey gathered from Alsike clover blossoms. He then remarked a lady has just returned that box claiming it was not honey, but a manufactured article. I said there was no way of manufacturing honey and putting it in the comb like that, all sealed over with beautiful white cappings: and further explained that the lady had probably purchased this section with the impression that it was either white clover or basswood honey, which would be light amber or light colored, instead of the pale wine color characteristic to Alsike, and although of excellent quality, yet these should not be classed together. He said it was pure honey, but the lady had been reading some of the newspaper articles about comb manufactured and filled with imitation honey, seared over as though capped by the bees, and sold for a genuine article; and she had formed the impression that this was of the kind she had been reading about.

Mr. Salmon then stated that this newspaper talk about adulterated honey was seriously affecting his trade, and unless something was done to counteract its influence, the honey trade would be badly injured; that he knew they were erroneous, but that did not prevent a great many who naturally would become consumers from entirely discarding honey from their tables as a vile, unhealthy article of food. He then related the following circumstance which took place in his store shortly before this conversation:

He had received a large consignment of honey from Mr. C. J. Van Eaton, of York, part of which was piled in his show window. A gentleman of the highest integrity who represents the Kingsford Starch Co., observing the display, candidly put the interrogatory: "Is that manufactured honey, or was it made by the bees?" Being assured that it was the work of the bees, he made the statement, that while visiting the Exposition in Chicago, this fall, he saw a large exhibit of comb honey made by Thurbers, of New York, that bees had never seen or touched, the whole being manufactured without their aid or assistance. He was positive in his statement, and could not be convinced to the contrary. This gentleman, as before stated, is head agent of the Kingsford Starch Co., and resides in Detroit. His name and address can be obtained if desired.

I promised Mr. S. to write you full particulars as you resided in Chicago, and probably would be cognizant of that exhibition of honey. When persons of such standing and business capacity as is this gentleman, are so grossly deceived and induced to believe such impossible statements, and go repeating them in their travels among grocerymen all over the country, how is their influence to be counteracted and the contradiction as extensively told as the story has been circulated? While the BEE JOURNAL and *Bee-Keepers' Magazine* have taken firm and decided positions against food adulterations of all kinds, and especially that of honey, declaring war to the knife against glucose and grape sugar, I regret to say that one bee periodical, with a large circulation, though more passive on the subject, still recommends their use for feeding purposes; thus giving to the outside public grave cause for suspicion. Here comes the question for serious consideration: Is it advisable to buy grape sugar for feeding purposes, when a suspicious public are so closely watching the honey raisers' every movement?

After reading reports of raising (to them) of almost fabulous amounts of honey, are they not likely to have a doubt about its purity when they have seen boxes and barrels of this great adulterant of all sweets unloaded at the bee-keeper's door? Will it not be better for honey raisers to entirely discard the use of this vile adulterant that the product of their apiaries may not have even the taint of suspicion.

Peoria, N. Y.

[The Detroit man had been deceived by Wiley's lie about the manufacture of comb honey—which he excused as a "scientific pleasantry," too absurd for any one to believe. There was no such exhibit at the Chicago Exposition. It is nothing but fiction, for we personally examined the exhibition, and there was no large exhibit of comb honey there.—ED.]

For the American Bee Journal.

Elgin, Ont., Bee-Keepers' Association.

The bee-keepers of Elgin met at St. Thomas on Tuesday last, when Mr. S. T. Pettit, of Belmont, was appointed President of the convention; Wm. H. Hill, of St. Thomas, Vice-President, and John Yoder, of Springfield, Secretary-Treasurer. It was resolved that this association be known as the Elgin, Ont., Bee-Keepers' Association, after which suitable constitution and by-laws were adopted, and that this association believe that the honey interest of Ontario demands legislation to enable bee-keepers to successfully contend with foul brood, and that a director be appointed to act with the executive committee of the Ontario Bee-Keepers' Association in that behalf. Adjourned until the 29th inst.

For the American Bee Journal.

My Report for the Past Season.

S. CORNEIL.

Last spring we had 64 colonies alive out of 65 put into the cellar in the fall, one having starved. For about seven or eight weeks the temperature averaged about 8° lower than usual for that season of the year. I sold four, lost several queens, and united weak colonies, so that on the 2d of July, I had only 48 good, bad, and indifferent. We ran 43 of these for extracted honey, and reserved 5 of the weakest to be used as circumstances might require. We commenced to extract on the 7th of July, and finished on the 24th of August, with a yield of 8,579 lbs., and an increase of 58 besides 154 lbs. of comb honey. We weighed the combs of each hive before and after extracting them. I have never tried to determine accurately how much the honey loses in weight by remaining in the solar evaporator a week or ten days, but I have an opinion that the loss is considerable. We have sold the last of the crop, and have realized an average price of 13 cents.

On the 10th of October we weighed our bees and found it necessary to feed 350 lbs. of loaf sugar. We weighed them again on the 12th of November. Those which had not been fed lost from 2 to 3 lbs. in that time. I sold 2 colonies, and my son purchased 11 on his own account, making in all 115. Of these 114 are stowed away in a small cellar, covered with quilts of wool, but without bottom boards, there being a clear open space of from three to four inches under the the frames of each hive. We are wintering one outside in one of Jones' double-walled hives.

I have a strain of bees which I believe I might back against anything on the Continent for gathering honey, and for getting into good condition in the fall for winter. I bought a dollar-queen from Mr. H. Alley in the summer of 1880. After a few weeks I found she had either met with an accident or else she was superseded, because I found in her place a nice, yellow unclipped queen, not yet fertile. For two years in succession I found this colony was so much stronger and had so much more stores than the others, that I decided to leave it on the summer stand. In the summer of 1881, it was the best in the yard for honey gathering. In 1882 we had hardly any honey, but I divided and subdivided this one so much for queen rearing that it was not strong in the fall. Notwithstanding this it had a queen-cell with an egg in it on the 25th of May last. We did not allow it to swarm, but changed places with a 3-frame nucleus. Six days after, the nucleus threw off a natural swarm on account of the crowd of bees obtained from the strong one. In July last the queen was superseded leaving a nice lot of queen-cells. I placed one in each eight combs, and when they were nearly ready to hatch I removed seven of these with sufficient bees to form a nucleus, to new stands. After all these drafts on the old colony, it gave us .308 lbs., of extracted honey. The largest yield from one colony was 343 lbs. It was a Syrian colony crossed with Italian blood.

I never saw the honey so thick as it was this season. I tested some taken from combs which had been emptied just 48 hours before, and found the specific gravity was 1.400, the English standard according to the *British Bee Journal* being 1.261, and in Germany from 1.414 to 1.455. Duncan, said to be the latest and best authority, gives it at 1.333, pure water at 60° being 1.

Lindsay, Ont., Dec. 17, 1883.

For the American Bee Journal.

Experience in Wintering.

J. V. CALDWELL.

Now that our bees are in their winter quarters, is a good time to discuss the problem of the saving of our bees, until the mild and sunny days of spring and summer are with us again. We read the experience of our brethren in the business, and, turning from the facinating pages of our favorite bee periodicals, we can repair to our winter repository, and see how our little pets are prospering in their long winter sleep.

In this business, theory as against practice makes but a poor showing. I am willing men should theorize, and am willing to read their theories; but this whole bee-business to some of us at least, is getting to be one of the most intense interest, inasmuch as we are depending upon it for our daily bread, and the support and education of our families.

But to the question in hand, Mr. Heddon takes very kindly to the pollen theory, and indeed, it may be justly called a theory, at least so far as he has not proved himself to be a successful winter bee-keeper. I am glad Mr. Heddon is making experiments in this line, as it may lead to good results. I am glad to notice that he thinks that a safe and cheap mode of wintering, will lead to placing them in good cellars. I am in favor of cellar wintering, and always have been; but granting that the cellar is the only safe way in this latitude, another important question comes up right here:

Mr. A. puts them in early in the winter, giving them plenty of both upward and downward ventilation, while Mr. B puts them in late, and wants them thoroughly chilled, so they will not breed until set upon their summer stands. Again, Mr. C. places his bees to the number of 200 or more colonies, in a warm cellar with a temperature at times of 65°, or warmer, with no ventilation in the cellar, and but little in the hive. One must have them perfectly dry; another must have them perfectly wet (I was going to say). My own experience has shown me that at least, they do not need to be kept dry; that is, the room need not be a dry one. My bees 4 years ago were kept in a cave in a side hill, and were put in as soon as it was finished, the bottom fresh, damp clay, and the sides were new green boards. They were in about 100 days, and came out in the best possible condition, as they did not spot their hives in the least, when taking their first flight.

The past winter of 1882-83, one of the coldest we have ever had, my bees were wintered in the same kind of a cellar, and came out in just as good condition, except the ones that were drowned, as the water got in while I was away from home, and rose to the depth of a foot or more; these dead ones had quite a large amount of brood, 7,000 to 8,000 bees in process of hatching.

I cannot see how the pollen theory can figure in such cases. It may be possible that Mr. Heddon's bees get it in such excessive amounts that makes it such a difficult job to bring his bees safely through a cold winter. But, Mr. Heddon, I cannot resist the temptation to give you a piece of friendly advice. You must not persist in wintering your bees on the old fogy plan, so much in vogue with our ancestors centuries ago.

Who are the successful winter bee-keepers? They who safely winter them in both cold and warm winters. Do they let them set out-doors in snow and wind, and zero weather? Stand up, ye successful ones who do this. I have a vision, and behold, before me a great multitude of bee-keepers, as it were, in a vast level plain, and I see a hill in the midst thereof, and he it is who does this very thing, and he keeps them safely; but where are the ninety-and-nine who lose them all? But I must bring this article to a close. Thousands of the most skillful bee-keepers are safely keeping their bees from year to year in warm cellars, and will I think continue to do so.

Cambridge, Ill.

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For the American Bee Journal.

To Bee-Keepers of Illinois and Iowa.

The regular annual meeting of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Moore's Hall, No. 110 East Third street, on Thursday, Friday and Saturday, Feb. 21, 22 and 23, 1884.

Mr. T. G. Newman, of Chicago, editor of the Weekly BEE JOURNAL, will be with us, and has been engaged to give two lectures on "Bee-Keeping" on the 22d and 23d.

It is hoped that the members of the Association, and others will bring or send honey, apiarian supplies, etc. Any shipment of these, sent to Mr. Israel Hall, Treasurer of the Bee-Keepers' Association, Davenport, will be taken from the express office, removed to the Hall and cared for.

Also be ready to report results of last season's work.

Invitation is hereby extended, not only to the members, but also to their friends.

We want you to just swarm.

J. V. MCCAGG, *Pres.*
I. J. NAGLE, *Sec.*

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For the American Bee Journal.

Middlesex, Ont., Honey Crop.

W. H. WESTON.

Just at this time of the year it is advisable to bring our industry as much as possible before the public, and as we have not formed a Bee-Keepers' Society for this county yet, I took it upon myself to address the Western Fair Association of this city on the advisability of increasing their prize list for this year, and as the directors have not met yet, I sent the following letter to our daily paper, thinking that if any of them should read it, perhaps it would impress them favorably.

"If full statistics could be given of the honey crop of this county, the figures would be as interesting as they would be surprising. During the last few years quite a large number of farmers and mechanics have undertaken the care and development of bees, with the result that thousands of dollars' worth of rich and useful honey has been gathered that would otherwise have dried up in the flowers under the summer sun. The smallness of the capital required is the greater temptation to those who invest in bee-keeping. As an instance both of the profitable characters of this industry and the extent to which it is being developed in this district, the case may be given of Mr. Pettit, living near Belmont. He began last season with 72 colonies, and at the end of the summer he sold $970.53 worth of honey, and kept 225 lbs. for his own use, which would bring up the total value of his season's yield to $1,000. Now, on a fair estimate, $700 of that sum would be profit. There have been many others besides who have found the production of honey to be so profitable that they have made arrangements to largely increase their bee accommodations for next year. At the Western Fair, last year, there was about $10,000 worth of honey shown, and many of the leading bee-keepers were not on hand, owing to the meagreness of the prize list and lack of accommodation. There are many interesting facts in connection with bee life that may be given at another time."

London, Ont., Jan. 28, 1884.

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Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

SELECTIONS FROM OUR LETTER BOX

Mild Winter in England.

We are experiencing a very mild winter. I have not heard of much mortality amongst bees, at present. But, of course, it is too early to congratulate ourselves on this point.

ALFRED NEIGHBOUR.
London, England, Jan. 15, 1884.

Home Market for Honey.

I commenced the season with 23 colonies, after selling some; increased them to 48, and received 1,420 lbs. of extracted honey, nearly all from Alsike clover. I raise no comb honey, for I can sell 100 lbs. of extracted honey better than I can sell 1 lb. of comb honey. I sold at home, besides my own crop, 1,500 lbs. of extracted, and 150 lbs. of comb honey. I used quite a lot of the pamphlets, "Honey as Food and Medicine," and it paid me well. I use the Langstroth hive with the Simplicity top, at the home apiary.

E. S. HILDEMANN.
Ashippun, Wis., Jan. 29, 1884.

Wintering in Three Ways.

Yesterday being a fine day, my bees took occasion to air themselves a little. I have about 20 colonies on the summer stands, without packing of any kind. Some of them show dysentery, but not bad, as yet. I have 12 packed in timothy chaff, which appear to be all right yet, with the covering all dry and in good order. All together things are in a much better shape than I expected to find them after such unusual cold weather. I have 22 in my cellar that, to all appearance, are doing well. This wintering in three ways, is just like a disciple of G. M. Doolittle, is it not?

T. N. MARQUIS.
Woodland, Ill., Jan. 31, 1884.

Dysentery.

Will any of the bee-keepers of Iowa who winter bees in cellars, please notice the first signs of dysentery, and carefully note the date and report in the BEE JOURNAL? I have 140 colonies in one cellar, and to-day, Jan. 26, I find them all well; they have been confined 44 days, temperature 38° to 40° since Jan. 1.; before, at 45°.

L. L. TRIEM.
La Porte City, Iowa, Jan. 26, 1884.

How far Bees go for Honey.

This is a question which is very unsatisfactorily answered. A number of years ago, when the Italian bees were first introduced in this part of the country, a man noticed his bees working very busily in the direction of the river; he followed them up and found them working on the river bottom, six miles from his farm; this was on fall flowers. My own bees have frequently worked on sweet clover four miles from the apiary. In the direction they worked the clover was two miles distant, where it commenced; it was along a roadside, so they followed it up, and were storing honey quite fast. A man in this place claims that he had known bees to work on sweet clover a distance of not less than eight miles, but I cannot vouch for it. H. S. HACKMAN.

Peru, Ill., Jan. 24, 1884.

No Signs of Dysentery Yet.

I commenced last spring's work with 74 colonies, many of them very light. I got 1,000 lbs. of comb honey in 1-lb. sections, and 3,500 lbs. of extracted, nearly all white clover; no basswood. About 900 lbs. of it light fall crop, all is now sold except about 600 lbs. I have realized about $600. I use the Golden bee hive, and think it an excellent hive for this latitude; no trouble to get bees to work in the sections with it. I put 104 in the cellar, and have 3 colonies buried in the snow. The winter has been very cold; no signs of dysentery yet.

B. F. LITTLE.

Brush Creek, Iowa, Feb. 1, 1884.

The Old Plague.

Some of our colonies begin to show signs of the old plague, dysentery or diarrhœa. We are glad that we have had winter enough to make our test of some value. We shall study closely the effects, as auxileries, that cold confinement, and humidity have to do in connection with the main cause, when we are sure of this cause. We have seen colonies come through in good condition, when cold had done its worst, when confinement had also, and when humidity had drenched the combs, and we cannot think any or all of these can be the main cause, because further, we have lost our colonies by the majority when none of these conditions were present. How they act as aggravations to the cause. we are carefully studying. I will report later. JAMES HEDDON.

Dowagiac. Mich., Feb. 1, 1884.

Bees winter as Safely as Sheep.

My 300 colonies of bees are wintering all right in my bee cellar. 16x16 feet, inside measure, tiered up 4 tiers high, with no upward ventilation in the hives; the hives rest on scantling 3 inches thick; no tight bottom boards for me. I have in this way wintered my bees for the past 6 years, without any loss to speak of. I can winter bees as safely as I can sheep, with plenty of hay and oats. A. JENNINGS.

Medusa. N. Y., Jan. 29, 1884.

Bee-Keeping in Middle Texas.

For the past year or two bee-keeping has received increased attention in the improved methods as well as enlarged apiaries and additional friends. in this part of Texas. The past season was very unfavorable for bees, in fact the most so of any in quite a number of years, and has had a tendency to discourage beginners. and, perhaps, abate the enthusiasm of some of the more advanced keepers. Bees went into winter quarters generally with light supplies, and many colonies will require feeding to bring them out in the spring alive, and in working condition. The winter, since Christmas, has been almost continuously cold, and of more than average severity. In the end this may work in the interest of bee-culture, for it may so retard the business as to force a better understanding of it, in all its details, which is necessary to success. If discouragements in the beginning, do not drive one from an enterprise, they usually form the basis of success. Let us hope this will be the case with young bee-keepers under the unfavorable circumstances and difficulties encountered the past season in this part of Texas. With the experience thus gathered, and the hope of a better time ahead, let us use the coming year in over-coming the failures of the past, and place bee-keeping further on the road to success than it has been before.

W. P. HANCOCK.

Salado, Texas, Jan. 26, 1884.

Bees Wintering Well.

The bees are all lively up to this time. I think they well winter all right. I have my bees in a building in a side hill, with a ventilator at the top of the building. I feel disgusted at some who are so blind as not to take any bee papers. I know of some not far from me that have, this winter, lost enough to have paid for the BEE JOURNAL several years. I expect to give all my time to the care of bees after this season.

W. A. CARMACK.

Marengo, Ill., Feb. 2, 1884.

Bees doing Nicely—No Dysentery.

The snow is all gone, after a three-days' thaw, and to-day the thermometer stood at 54°; bees had a good flight, and all responded to roll call. No dysentery yet. They have plenty of stores, and had a good chance to change their position in the combs. Some of my box-hive neighbors lost some of theirs, and they want to change to frame hives in the spring, those that are left. If mine will pull through the rest of the winter and spring as well as they have done so far, I can be thankful.

J. W. STURWOLD.

Haymond, Ind., Jan. 31, 1884.

Will County, Ill., Association.

The meeting of bee-keepers at Monee, Will Co., was not as well attended as expected, owing to the snow drifts that blocked the roads, and made it impossible for farmers in the neighborhood to attend. However, there were quite a few bee-keepers present. It was decided to organize a society to be called the Will County Bee-Keepers' Association. A. Wicherts, of Mattison, was chosen President, and P. P. Nelson, of Manteno. Secretary, to serve temporarily. There will be a meeting at Monee on Monday, May 26, to fully organize, adopt a constitution and by-laws and transact any business that may come before the meeting. Fourteen names were enrolled as members. The following subjects were discussed in a very social, enthusiastic way: "Who should keep bees?" "Winter and spring management;" "Early stimulative feeding;" "Cellar and out-door wintering;" "The best hive to use;" "The best way of increasing;" "How to feed and what to feed." All went home feeling that they had a pleasant and profitable meeting. We wish to extend a cordial invitation to all interested in modern bee-culture to attend the meeting in May.

PHILIP P. NELSON, *Sec.*

Monee, Ill., Jan. 28, 1884.

Register for the Apiary.

I have received the Apiary Register, and feel well satisfied with it. I like the arrangement of the book first rate. S. D. REIGEL.

Adelphi, O., Jan. 31, 1884.

Bees Flying.

After about seven weeks in a snow bank, and lots of cold weather, my 16 colonies of bees had a fly to-day, and seemed to enjoy it; 7 are in chaff hives, and 9 packed in a low shed with shavings all around. All are apparently doing nicely, so far.

C. W. YOUNG.

Hartford, Ont., Feb. 1, 1884.

☞ A bee-keepers' meeting will be held at the Pember house, Janesville, Wis., on the second Tuesday in February, at 10 a. m., for the purpose of organizing a bee-keepers' association. We hope the meeting will be well attended by all that are interested in bees and honey.

MACK & FATZINGER, *Com.*

Local Convention Directory.

1884. *Time and place of Meeting.*

Feb. 12.—Meeting at Janesville, Wis.
Mack & Fatzinger, Com.

Feb. 12, 13.—Convention at Arcadia, Wis.
E. A. Morgan, Sec.

Feb. 14, 15.—Maine State, at Lewiston, Me.
Wm. Hoyt, Sec.

Feb. 21-33.—E. Iowa, & W. Illinois, at Davenport, Ia.
J. V. McCagg, Pres.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

March 20.—Southern Indiana, at Madison, Ind.
H. C. White, Sec.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

How to Wear a Bee Veil.

In response to several, I will say that I consider a black all-bobbinet bee veil the best face protector we have. The meshes are round, and the shape and color is best fitted to clear vision. To make one requires a yard of goods, 20 inches wide. When sewed up, the veil will be 20 inches long, 3 feet in circumference, and one foot in diameter. The usual way of attaching this veil to the hat has been to have a cord "run" into the edge of one end and drawn up to the size of the crown of the hat. When drawn over, the veil comes out over the rim and down over the face and inside the coat, vest or shirt collar. I have found that a much better way is to procure a new white chip hat (about 15 to 20 cents is the price), and sew one end of the veil to the rim. This can be done whether the rim is just one foot in diameter or larger; for if larger it can be sewed to the rim a short distance back from its edge. The wide rim hat gives better shade. When so used, your hat and veil are always to be found at once, and the veil is practically about 6 inches longer than when used in the way first mentioned.

Thermometers, Straight Combs, etc.

1. How are thermometers tested? Mine, when tested in salt and snow, marks 8° below zero, which is, I am told, 8° wrong. Mine, in the cellar, marks 46°. Now, if as tested above, it is 8° too low, should not the real temperature in the cellar be 54°, and not 46° as it shows?

2. If bees in brood-chambers are given starters, say if an inch, will they build straight comb? or how would it do to put in 3-inch strips? I ask this as foundation seems to be so scarce and dear. John Yoder.

Springfield, Ont.

1. This question is somewhat out of my latitude. I have always understood that the point zero was the lowest point that could be made artificially with ice and salt. It might be best for you to compare your thermometer with others, then, even though your test be correct, your thermometer may be all right, as compared with thermometers in general, and it is from these that we have taken our cue regarding proper temperature.

2. A single inch of foundation works splendidly as a guide to straight combs. When I used such a strip, I found it best to put it the whole length of the bar, but preferred to have it in 3 pieces separated from each other, about 1-5 of an inch; this kept it from waving, which it sometimes did when in continuous strips. I would prefer this to 3-inch strips, for the one point of getting straight combs, and should choose it of the two. I believe it pays more than twice over to use full frames of foundation on wires, both for the saving to the bees, and to get rid of drone comb in colonies whose blood you do not wish to perpetuate, and excess of drone-comb everywhere, especially when brood foundation can be bought for 50 cents per pound.

Moving Bees in Winter.

On page 384 of the Bee Journal for 1883, Mr. Heddon promised an article on moving bees, giving his method, but so far I have not seen it. I have 75 colonies to move 3 or 4 miles, and would like to move them now on the ice in the river. How shall I do it? D. H. Lisle.

Waldron, Ill., Jan. 27, 1884.

When promising an article on removing bees, I had reference to moving them short distances, in such manner as to prevent their returning to the old stand. In moving 3 or 4 miles no such precaution is needed. You can move them on a sleigh (use "bobbs") by filling the box with straw, or on a common wagon in the same manner. Put in twice as much straw as you think you need, and you will have none too much. If I could have but one, I would rather have straw than springs. I should not move the bees until the weather was such that they could fly immediately after reaching their new location.

Comb Foundation.

Will Mr. Heddon please answer the following:

1. How long may foundation be made before it is unfit for use?
2. Can old foundation be treated so as to make it as good as if fresh made?
3. Can foundation be pressed into wired frames by hand as good as if done by a press?
4. How would you press it in by hand? Richard Grinsell.

Baden, Mo., Jan. 26, 1884.

1. I think that the fresher foundation is, the better, though I have seen that one year old well-handled by the bees, but it seemed to be with more difficulty.

2. Mr. D. A. Jones suggests dipping the sheets in hot water (of course not leaving them there long enough to melt). This may make them appear softer; in fact, may loosen up the fiber a little, yet I think there has been an evaporation, loss, or drying-down of some of the oils that this method does not re-place.

3. It cannot be pressed on to the wires as smoothly and perfectly as if done by the press, but it can be done so well that after the bees get through manipulating it, it is in every way as perfect as if done by the machine.

4. When your frame material is out, and before nailed up, punch holes (centrally) through the top and bottom bars about 2 inches apart, and have the outside holes not further from the end bar than one-half or three-fourths of an inch. Use No. 30 tinned wire. Now sew the frame, beginning in the middle and sewing each way with each end. To fasten the ends I use a small tack, or the nails that nail the bottom-bar may be left a little out. Be careful not to draw the bottom-bar bowing by drawing the wire too tight. Diagonal wires may be put on, but I do not use them, as I find no need for them. To use them, fasten one end to the tack or nail-head, and then go down through the first hole, and through the one nearest the center of the other bar, then up through the other center hole, and fasten this end the same as the first. Now the frame is wired. Next make a lap-board larger each way than your frame is the longest way. Now cut from one-half inch lumber a board that is one-fourth inch smaller each way than the inside measure of your frame. Nail this board securely to the seven-eighths lap-board, and let the grains run cross-ways of each other. This will prevent warping. With a sponge or rag, wet the thin board or form. Have already-cut some sheets of foundation one-eighth less in size than your frame measures inside. Turn up about 3-16 of one edge, and (have the wax sheet warm) with a stiff, broad putty knife, or chisel, masb the turned-up portion to the top-bar (which should not be rough), so that the sheet will hang centrally in the frame. We have a rest fixed for the frame, on our work bench, to hold it while we do the mashing. Next lay the frame and foundation (foundation down) on the lap-board and over the form, and while the sheet is plastic, push the wires down into the base of the cells. This can be done with an eight-penny nail; some use a wheel

with points upon it. I have had success with a straight piece with about 10 points, about one-fifth of an inch apart, the points being about ⅛ wide and 1-64 thick, so adjusted that they roll lengthwise of the wire, while each point runs crosswise of the wire. Of course they are not properly points. This puts the wire in quite rapidly, and is entirely satisfactorily.

Profitable Increase.

Will Mr. Heddon tell us which he thinks the better plan to increase an apiary rapidly—the nucleus plan proper or the pound of bees? In the former, combs and brood are taken from strong colonies, and by the latter, bees are shaken from the combs, a queen given them, and a new hive, etc., given the miniature colony. I propose dividing my apiary, which is small, and establishing the new yard two miles away with mountain peaks and ridges intervening, and change bees from yard to yard as new colonies are formed.
E. E. Ewing.
Highlands, N. C., Jan. 22, 1884.

I have no choice to offer in the plans mentioned. I should never use either. I should go for honey, and take that increase came in the natural way, and when this was not fast enough for me, I should get my further increase by purchasing of some one whose troubling problem was "how to prevent further increase."

Troubled with Moths.

I am told by a man who lives in this neighborhood, how to prevent the moth troubling bees. He professes to know much about the little fellows, and says, at the season of the year when the fly comes, to build a fire in the apiary every evening at sundown, and keep it blazing until two hours after dark. He says the fly will fly into the fire and burn up. I have but little faith in it; will it do? I was troubled with moth in colonies very much last year.
J. N. Smoot, M. D.
Fulton, Ky., Jan. 25, 1883.

The plan your neighbor offers might catch some moths, while others might not be thus caught. Such a method would be disagreeable, troublesome and dangerous in most apiaries. A better plan is to take a tin cake dish which has a "tin hole in the center," put a lighted candle in the hole and water under it in the dish; let the candle be short, to bring the blaze near the water. What is better still than this plan, is to keep your colonies normally strong compared to the combs in their possession, and have them possess a portion of Italian blood. Keep all pieces of comb out of the way of moths, giving them no chance to breed about your premises outside of hives, and the bees will take care of the rest.

Remedy for Dysentery.

Please give the best remedy for dysentery that you know of. I have a few colonies that are affected with it; they are in the cellar, and they have no brood and the hives are dry. I have one colony that has lots of young brood, and the hive is very wet, but no signs of disease.
X. Y. Z.
Monroe, Wis., Jan. 25, 1884.

I know of no successful remedy for dysentery among bees. I have tried several that I have read of as successful, and some of my own originating, but none can be relied upon. We are now working at prevention, and I believe we are going to get it in a cheap and practical manner.

☞ The annual meeting of the Maine Bee-Keepers' Association will be held at Small City Hall, Lewiston, Feb. 14 and 15, 1884. The meeting will open at 1 o'clock, Thursday p. m. The afternoon will be devoted to the President's address, reports of the Secretary, Treasurer, Vice-Presidents of different counties, and all committees. A session will be held Thursday evening for essays and discussions. Friday morning election of officers. Friday afternoon essays and discussions. The Western Maine Bee-Keepers' Association will also meet at the same time and place. The Maine Central railroad will grant free return tickets to all paying full fare one way. Let there be a full attendance, and a good display of apiarian implements.
Wm. Hoyt, *Sec.*

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.
Wm. R. Howard, *Sec.*
Kingston, Tex., Jan. 16, 1884.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.
C. M. Crandall, *Sec.*
Independence, Mo.

☞ We intend to organize a bee-keepers' association for Southern Indiana on March 20, 1884, to meet at the Merchants and Manufacturers' Club Rooms, Madison, Ind., at 9:30 a. m. Kentucky bee-keepers are invited to participate.
H. C. White.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Feb. 4, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.
BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.
Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 15@21c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.
BEESWAX—Prime yellow, 34@35c.
H.K. & F.B Thurber & Co.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.
BEESWAX—Scarce, at 28@35c., according to color and cleanliness.
R. A. Burnett, 161 South Water St.

KANSAS CITY, MO.

HONEY.—Receipts liberal, and sales satisfactory. White comb, 1 and 2 lb. sections, 17@18c. I could place several thousand pounds of dark, fall extracted honey, at 8@9c. Who has any? Do not all speak at once.
Jerome Twichell, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Only in a small jobbing way is there any business. Prices favor buyers on all except strictly fancy qualities. White to extra white comb, 15@18c.; dark to good, 9@11c.; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—
BEESWAX—Wholesale, 27½@30c.
Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Comb, 13@18c. strained and extracted, 7@8c.
BEESWAX—Firmer, at 31@32c.
W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.
BEESWAX—In great demand, but no supply; nominally 30c. per lb.
A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.
BEESWAX—35c.
Blake & Ripley, 57 Chatham Street.

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ A correspondent asks if any one may select a Binder for the Bee Journal, among the books given as Premiums for getting subscribers; we reply, yes, any book or binder we keep for sale may be selected by those who get up clubs.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

The Bee Keepers' Handy Book

216 pages, bound in cloth, by mail, post-paid, for **$1.00** per copy. Send for prospectus and our special Circulars describing three new and useful articles for the apiary.

47Atf **HENRY ALLEY**, WENHAM, MASS.

BE SURE

To send a Postal Card for our Illustrated Catalogue of APIARIAN SUPPLIES before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.

J. C. SAYLES,
51D15t 1B5t HARTFORD, WIS.

Dadant's Foundation Factory, wholesale
See Advertisement in another column.

1884.

6 Warranted Queens for $5.

Write for Circular. **J. T. WILSON,**
1BC18t MORTONSVILLE, KY.

"BOSS" ONE-PIECE
SECTIONS.

We have again increased our capacity for making the "BOSS" ONE-PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS**, to

ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.,
49Ctf Watertown, Wis., Dec. 1, 1883.

Dadant's Foundation Factory, wholesale
See Advertisement in another column.

MANUFACTORY
FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
1Ctf 12Btf DUNDEE, Kane Co., ILL.

The Kansas Bee-Keeper.
[ESTABLISHED IN 1881.]

One Dollar a Year.

A Live Monthly Magazine, devoted exclusively to Bee-Culture. Its regular Correspondents and Assistant Editors are among the most practical and progressive bee-keepers of the age. The well known specialist, James Heddon, of Dowagiac, Mich., will furnish a series of articles running through the whole volume. J. E. Pond, Jr., Foxboro, Mass., will continue his "Hints to beginners." The Question Drawer will be conducted by the editors, whose aim will be to make it of especial value to those yet in the A B C of bee-culture.

H. SCOVELL, J. E. POND, Jr., Editors.
Sample Copies free.
Address,
Bee-Keepers' Publishing Co.,
6C3t COLUMBUS, KANS.

WISE people are always on the lookout for chances to increase their earnings, and in time become wealthy; those who do improve their opportunities remain in poverty. We offer a great chance to make money. We want many men, women, boys and girls to work for us right in their own localities. Any one can do the work properly from the first start. The business will pay more than ten times ordinary wages. Expensive outfit furnished free. No one who engages fails to make money rapidly. You can devote your whole time to the work, or only your spare moments. Full information and all that is needed, sent free. Address STINSON & Co., Portland, Maine. 8A1y

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Dadant's Foundation Factory, wholesale
See Advertisement in another column.

CANADIANS,

Send for our Illustrated Catalogue and Price List of Apiarian Supplies. Address, M. RICHARDSON & SON, box 212, Port Colburne, Ont. 1D4t

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Stanley's Dollar Smoker,
U. S. Standard Honey Extractors

very low. Also all other Bee-Keepers' Goods furnished at reasonable prices. See advertisement in the Weekly BEE JOURNAL for Jan. 2. Address all communications to

G. W. STANLEY & BRO.,
3Dtf WYOMING, N. Y.

The Bee-Keepers' Guide;
Or, MANUAL OF THE APIARY.

10,000 SOLD SINCE 1876.
11th Thousand Just Out!

10th Thousand Sold in Just Four Months!

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mall, **$1 25**. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
47D10t 18C7t LANSING, MICH.

BEE HIVES!

Simplicity, Langstroth and Chaff Hives, Section Boxes, Brood Frames, and Comb Foundation. Send for Price List. The successors of A. B. Miller & Son.

MILLER BROS.,
51D8t NAPPANEE, Elkhart County, IND.

The All-Purpose Hive

Continuous passages—No Honey Board—No Bee space. Sample in the Flat—No Patent. Given Foundation, Sections, etc. Circulars free.

GEO. F. WILLIAMS,
1D6m NEW PHILADELPHIA, O.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine.
4A1y

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For the manufacture of
BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLON**, Bayou Goula, La.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to

Ctf A. I. ROOT, Medina, O.

WOOD CUTS
Made to order, of any Subject,

in exchange for **Apiarian Supplies**. Reference, editor of this paper. Address,

H. L. PENFIELD, Engraver,
4Ctf HUNNEWELL, Shelby Co. MO.

Dadant's Foundation Factory, wholesael
See Advertisement in another column.

BEE-KEEPER WANTED.—ADDRESS, stating terms. C. WEEKS, Clifton, Tenn.
5A4t

$72 A week made at home by the industrious. Best business now before the public. Capital not needed We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine. 8A1y

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FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Notice to Bee-Keepers.

The Price Lists of the Champion Bee Hive manufactory, New Comerstown, Tuscarawas County, Ohio, will be ready for distribution by the 10th of February. They have the finest lot of HIVES and SECTIONS for spring trade that there is on the market. Send for Price List.

5A2t **R. L. SHOEMAKER, Prop'r.**

REST not, life is sweeping by, go and dare before you die, something mighty and sublime, leave behind to conquer time." $66 a week in your own town. $5 outfit free. No risk. Everything new. Capital not required. We will furnish you everything. Many are making fortunes. Ladies make as much as men, and boys and girls make great pay. Reader, if you want business at which you can make great pay all the time, write for particulars to H. HALLETT & Co Portland, Maine. 8A1y

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NO MORE ORDERS WANTED.

I wish to give notice to all bee-keepers that I cannot accept any more orders for Sections this season, as I already have all the orders on my book that I can fill before the honey season commences. I will here say, that I am preparing to build "at once" a larger factory, in which I intend to use steam-power, and expect by another season to be able to fill all orders promptly, by the aid of more and improved machinery. I shall be able to turn off four times the amount of work I ever have before.

Respectfully, A. E. MANUM.
Bristol, Vt., Jan. 21, 1884.

☞ ☞ ☞ ☞ ☞ ☞ ☞ ☞ ☞ ☞

THAT STRIKES US!
—AND—
All Bee-Keepers who are in need of
SUPPLIES.

For the benefit of those who will be disappointed by Mr. Manum's refusal to receive any more orders this season, we wish to state that we have just completed an outfit of **Perfected Machinery, expressly for making**

White Poplar Dovetailed Sections,

The fame of which has crowded Mr. Manum to his utmost capacity. Our Factory is run by a 26-horse power engine, which enables us to **Supply all Orders for anything needed in a first-class Apiary.** After March 1, our capacity will be 10,000 sections per day. Before making purchases, it will pay you to send two 2c. Stamps for our Circular and Samples. We guarantee good work or money refunded.

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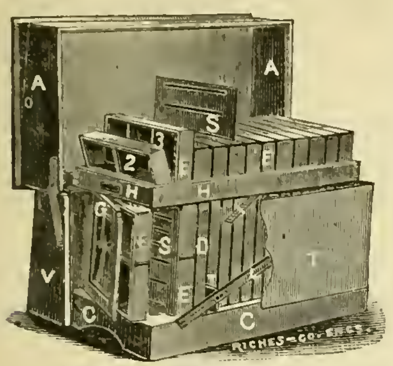

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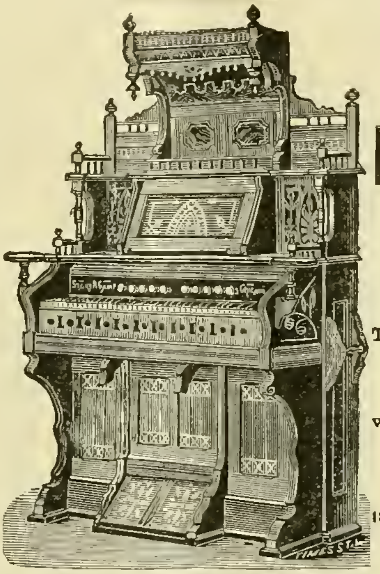

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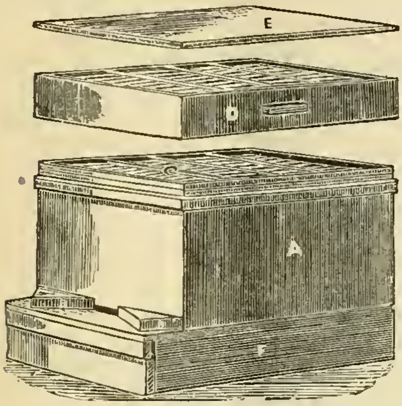

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Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

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Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

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ESTABLISHED IN 1861. Chicago, Ill., February 13, 1884. VOL. XX. No. 7.

THE WEEKLY EDITION OF THE AMERICAN BEE JOURNAL

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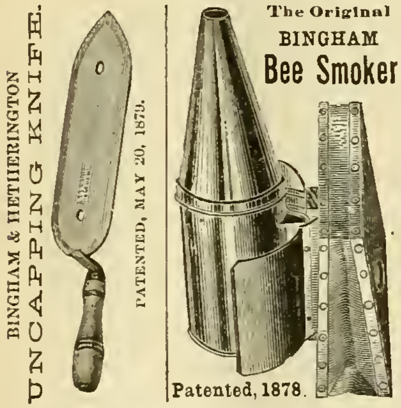

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Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

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THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

☞ We can supply all new subscribers and renewals with the numbers from the beginning of the year, and shall do so unless otherwise ordered—presuming that it is so desired.

* * *

☞ "How to Become a Good Mechanic," is the title of a pamphlet of 46 pages, by an "Old Apprentice," and published by the Industrial Publication Company of New York, at 15 cents. It is intended as a practical guide to self-taught men; telling what to study, what books to use, how to begin, what difficulties will be met, how to overcome them. In a word, how to carry on such a course of self-instruction as will enable the young mechanic to rise from the bench to something higher.

* * *

☞ "Dzierzon's Rational Bee-Keeping," bound in cloth, are now all gone. We have a large lot bound in paper covers, which we are sending to any one clubbed with the Weekly BEE JOURNAL for a year, for $2.75. Any one who has paid for the BEE JOURNAL for 1884, may send 75 cents more for the book, and we will send it by return mail, postage paid. It is an imported book, printed in the English language, and the price of the book is $1.50.

* * *

☞ Several complaints have been received about the American subscribers not getting the *British Bee Journal* for January. Evidently there has been some accident—perhaps to the steamship bringing them across the Atlantic—for our number for Jan. 1 only came to hand on Feb. 8, after the one for Jan. 15 was received. This may explain matters some.

Another Severe Attack.

The many friends of the Rev. L. L. Langstroth will be pained to learn that he is again suffering from a return of his old malady, and unable to do any mental work. The following from his daughter, dated Feb. 6, 1884, is just received:

As my father is suffering from a return of his old malady, and is unable to attend to his correspondence, I write to let you know *why* you do not hear from him. The present attack seems to be unusually severe, but I trust it may be of short duration.

Yours respectfully,
ANNA L. COWAN.
Oxford, O., Feb. 6, 1884.

* * *

Glucose.

Mr. Pringle, of Selby, Ont., writes as follows:

The following appeared editorially on Jan. 22, in the *Toronto World*. I send it to you for the columns of the BEE JOURNAL, and will be pleased to see it followed by your own comments:

"The National Academy of Scientists at Washington made a report on glucose to the commissioner of internal revenue. It shows the manner of manufacture of grape sugar and glucose, and finds that the artificial is in no way inferior to cane sugar in healthfulness, and that maize starch-sugar, either in its normal condition or fermented, has no deleterious effect upon the system even when taken in large quantities. The illustrious scientists aforesaid might have sooner reached this conclusion, which is a perfectly sound one, had they reflected that honey is sugar in the state of glucose. Honey has been considered a healthy and desirable article of food since the days of Moses, and earlier. Further, the doctors say that every grain of crystalized sugar taken into the human stomach becomes glucose in the process of digestion. If glucose or grape sugar were simply kept by itself and sold on its own merits, it might soon come into very general use."

We have already commented on this matter, on pages 19, 52 and 68. The whole thing was intended to give a "boost" to the manufactures of the fraudulent stuff; but the gauze was too thin.

Time to Think and Review.

The Indiana *Farmer* gives the following "good and timely" advice:

As the spring advances it will be well to review the past season's work, and see wherein we have failed; to try and avoid like mistakes in the future. The winter and early spring is a good time to read upon the subject in hand, then there will be less danger of failures in the time to come. Hives and fixtures necessary for the season's work should all be secured in time. Do not wait until you are in urgent need of all these things before ordering, but order early and thus avoid not only the loss of time, but bees and honey, for time with us is money, for which we work. The writer knows from experience of what he writes.

On the amount of surplus secured depends the profit of the apiary, and for this end, it should be our aim. The honey crop should consist of both comb and extracted honey. For the former, large sections are best for home consumption or for a home market, but for the general market the one-pound sections are the favorite. But let the object sought be what it may, the first and most important part of it all is to be ready in time, for in this may depend the entire success of a season's work.

* * *

☞ The following named catalogues for 1884 are received:

Smith & Smith, Kenton, O.—Supplies
W. S. Cauthen, Pleasant Hill, S. C.—Bees and Queens—4 pages.
D. B. Brown, Des Moines, Iowa—Italian Bees—6 pages.
Apiarian Supply Co., Wilton Junction, Iowa—Bees and Apiarian Supplies—32 pages.
Miller Bros., Nappanee, Ind.—Hives and Supplies—8 pages.
J. W. Eckman, Richmond, Texas—Bees—1 page.
Smith & Morgan, Columbus, Wis.—Apiarian Supplies, Bees and Queens.
Hiram Sibley & Co.'s Seed Catalogue, Rochester, N. Y.—130 pages.
Cox's Seed Annual, San Francisco, Cal.—64 pages.

* * *

☞ We have so many articles for the BEE JOURNAL in waiting, that we give the preference, this week, to short articles and letters, so as to accommodate as many as possible. The others will appear as soon as we can get to them. Our correspondents will please have a little patience and "all will be well."

CORRESPONDENCE

For the American Bee Journal.

Statistics and Essays.

O. O. POPPLETON—155.

I would like to say something on these two subjects, which have been suggested by articles in the BEE JOURNAL of Jan. 30.

There is no need of my repeating any of the reasons given by Dr. Miller (page 70) why and when we want statistics of our honey crop, as he has stated them fully and correctly. What is wanted is to find the "How" to obtain them in shape and time to be of value.

Those obtained by assessors or other state officers, are undoubtedly more complete than can be obtained by any other means, but cannot possibly be obtained in time to be of value. We are, therefore, thrown on our own resources.

While we cannot get full and accurate statistics, I am satisfied from experience in trying to get them from my own State the past two seasons, that we can get them full enough to be of very great value in marketing our honey. What we want to know is, about what is the extent of the crop in different parts of the country, as regards an average crop, so we can judge about what and where the best market will be.

I have thought much on this matter, and now give suggestions of what seems to be the best plan I can think of. Let the executive committee of our North American Society decide what information is wanted, prepare a list of questions (as few as possible), then publish in each of the bee papers, at least one or two months previous to the meeting of the society, a request to all bee-keepers to send to the vice-presidents of their respective States, answers to these questions on a card, appending to this request a list of the vice-presidents and their *addresses.* These reports can be tabulated by the vice-presidents, and forwarded to the secretary, in time for him to prepare a tabulated report to the society. This will also have the advantage of saving some two or three hours of valuable time of the convention, now taken up in listening to individual reports from the States. This plan was tried last year, but entirely failed, because it was only published in one paper, and even that one omitted the addresses of the vice-presidents. These addresses are very important, as I doubt whether one bee-keeper in a hundred in Iowa knows where to address a card to me, if they were simply told that I was the proper person to send their reports to, and the same would be true in some of the other States.

We will probably have very little trouble so far as Iowa is concerned, as our State society is to meet at the time of the State Fair, about the close of the honey season, and, of course, statistics can be obtained then.

ESSAYS AT CONVENTIONS.

I have attended several important conventions, the proceedings of some of them consisting almost exclusively of essay reading, while others went to the other extreme, and my opinions are exactly the same as those given by Mr. Hutchinson on page 73, but he gives no suggestions or plan how those opinions can be practically carried out, which is a very important part of the subject.

I have devoted some thought to this subject, and the best plan I can think of would be the appointment of a committee to examine all essays that may be handed in—they to select such of them for use by the convention as are on topics of general interest, and so written as to be an excellent basis for the discussion of the topics they treat of. There are one or two serious objections to this plan, but it is the only one I can think of that will prevent the reading of long prosy essays on topics not of general interest, nor valuable as a basis for discussion.

Anything that helps to make our conventions more valuable, is well worthy the careful consideration of all persons who may be charged with their conduct.

Williamstown, Iowa, Feb. 1, 1884.

[Would it not be better to select a few topics, and appoint some person to prepare a short speech or essay to introduce each subject, making suggestions, etc.?—ED.]

* * *

For the American Bee Journal.

Ohio State Convention.

The Ohio State Bee-Keepers' Convention was held in Columbus, O., Jan. 14-16. First subject: "How to create a home market for honey." Dr. Besse said that by care and careful management there is no trouble in creating a home market. When he first began, could only sell from one to two pounds where he now sells from five to ten pounds. By making a good showing at County Fairs it helps greatly to create a home market.

Mr. Benedict thinks we should impress on the minds of the people that honey is healthy as well as a luxury, and that it should be kept in every house as a medicine for coughs, colds, and, in fact, for all lung diseases.

Mr. Goodrich, of Columbus, had no trouble in selling 2,800 lbs. of extracted honey at from 18 to 20 cents per pound. He put it up in five and ten pound buckets; thinks he can sell more by using the ten pound buckets.

Mr. Cochran advises using two-pound sections for comb honey in the home market; he thinks it is just as easy to sell two pounds as one; the first thing to do is to get the confidence of the people, so that they know that they are getting pure honey. Others engaged in the discussion, but generally agreed with the above.

"What shall we do to prevent adulteration of honey?" It was generally considered that we could do nothing more than when we knew of any person so engaged, that we publish them, and if they are members of this association, that they be expelled therefrom.

"Will bees feed on glucose?" It was said by those that had tested it, that they would not, if they could get anything else to work on.

"How many colonies can be kept in one locality at a profit?" It was generally decided that by sowing pasturage on the highways, creeks, and waste ground in a neighborhood, that there could not be bees enough put in any one locality to overstock it.

Mrs. Cochran asked if it was not the duty of bee-keepers to cultivate some honey-producing plants in order to keep the bees from destroying their neighbors' grapes?

A. I. Root, of Medina, spoke of the main honey plants, also mentioned the great western fireweed in this connection. Catnip, sweet clover, borage, etc., was also added to the list.

"How to prevent second swarms?" The method thought to be the best was to look through the hive, after the first swarm had come off, cut out all queen-cells and introduce a laying queen.

A committee was appointed to wait upon the members of the Legislature to see if we could not get an appropriation to be used in securing the statistics, and to investigate the causes of diseases among bees, etc. S. D. Riegel, Dan'l Spear, Burgis Helphry, Dr. H. Besse, C. M. Kingsbury, and J. T. Martin were appointed as the committee.

A committee was appointed to confer with the Ohio State Board of Agriculture in reference to an enlarged premium list for the State Fair.

A motion was then made to change the time of holding the annual convention from fall to winter, which was adopted unanimously.

"Which are the best size of sections?" I will not occupy space to give the discussions, but will give the votes as they were taken on the different sizes. The natural law of convenience will solve this problem better than we can do at conventions.

Mrs. Cochran said that ladies preferred the one-pound sections, as they are the most convenient for table use.

One member favored half-pound; 28 favored the one-pound; 3 favored the 1½ pounds; and quite a number did not vote.

The vote in favor of the width of sections was: 17 favored 1½ inches in width; 3 favored 1¾; 1 favored 1⅞, and one the 2-inch sections, and great many did not vote, as they had no preference. It was the unanimous expression of the convention to do without separators.

The subject of the size of frames for brood-chambers was next discussed. The majority favored the Langstroth; however, some favored the 10½x10½; others 12x12; and some 11x11, and all gave reasons why we should adopt their favorite sizes.

Mr. Fredenburgh says it is important that we should look through a colony after a swarm has come out, as they will sometimes swarm when there is nothing in the hive but an egg from which to rear a queen, causing the bees to be idle from 14 to 16 days; by giving them a laying queen they will at once go to work.

Mr. Benedict: There never was a young queen hatched in an Italian colony before the old one had left.

Mr. Spear: You cannot adopt any rule on which we can always rely.

Mr. Eaton: The best way to get good queens is to give the larva plenty of food. The young bees always rear the queens, as the old ones will not care for them.

"Introducing queens in new colonies," was next discussed. Various plans was given, of which I will mention a few, that was thought to be the best.

Mr. Benedict said his plan is to conquor his bees; first he gives them a little smoke, and after the old queen is removed, he shakes the bees down in front of the hive and drops the new queen among them; he repeats this two or three times and lets them go. Another is to use a small wire cage, with corks fitting in either end loose, attached to strings, the ends of which come outside of the frames; after the bees have become quiet, draw the corks out of the cage and let the queen out; it should be done quietly. The Doolittle cage is thought to be as good as any.

Mr. Root said that foundation is now made that will take from 15 to 20 feet to a pound, and that it has been greatly improved within the last year.

J. T. Martin, of Tiffin, then delivered a lecture on "Encouraging bee-keeping among the people."

The following lectures were delivered during the convention: Mr. Benedict read an excellent paper on "The management of bees for profit;" Dr. Besse on the subject of "Spring Management;" Prof. Lazenby, of the Ohio State University, on "The nature, quality and usefulness of nectar, for the purpose of plant fertilization;" Mrs. Jennie Culp reported her management of bees during the production of over two tons of honey.

"How to keep grass and weeds down around the hives?" Sprinkle salt around them; others advised the keeping of sheep or rabbits in the Apiary.

"Which is the best and quickest way to get and keep shade over the hives?"

The President and Mr. Root preferred grape vines.

"Are the new races of bees a success?" They were not thought very favorably of by the majority of those who had kept them, on account of their being so irritable, and on account of their being too prolific in time of drouth. When bees are the main object they are very profitable, as they have been known to increase 20 colonies in a single year.

"Where a perforated honey board is used will it prevent the queen from going up into the surplus chamber?" It was generally conceded to be of no use.

A committee was appointed to examine the honey and bee supplies, and in their report Mr. Root says that he has discovered that honey may be kept two years in as good condition as as that of new honey; the honey was that of Mrs. Culp.

Mr. Riegel explained a surplus honey box for containing sections of different sizes, which was considered to be quite an advantage to those that work for comb honey.

A general discussion ensued on how to winter bees successfully. Several ways were given, of which I will give two or three that was considered to be the best. One is to build a house with double walls about six inches apart, and fill between the walls with sawdust; also on the floor and ceiling about the same thickness, and at one end make an air tube from 10 to 12 inches square, allowing it to extend through the floor and within 3 feet of the ceiling; and at the other end of the building have a similar tube extending from within 3 feet of the floor, up through the roof; have a valve in the first tube, so that it can be opened and shut as the weather may change. In many instances where the cellar is well ventilated and dry, they may be wintered very successfully; the majority favored wintering on the summer stands. Care should be taken not to try to be too kind to the bees, as the entrance should be left wide open and some porous material put on top of them, and let them remain quiet all winter. The bees want more ventilation in the winter than in the summer.

Mr. Martin thinks the cause of bees dying when they have plenty of stores, is that they exhaust themselves in breathing so fast to inhale oxygen to keep up heat.

Dr. Besse's theory is that they starve to death with stores close to them, which they are unable to reach.

The committee to confer with the members of the Legislature report that they met the chairmen of the committee on agriculture in both branches of the Legislature, and they thought something ought to be done in that direction, and would give the bill a favorable consideration.

Prof. Riegel then gave a very instructive lecture on extracting honey.

Mr. Shively asked how to Italianize an apiary with one pure Italian queen. The Vice-President said the best way was to rear cells from the queen, and place them in nuclei or full hives. These young queens may, however, meet with impure drones; which must be prevented, if possible, by not allowing any black drones to be reared in the vicinity of the apiary.

Mr. Cole spoke of fertilizing queens late in the fall, when the bees had generally destroyed the drones; said he had reared queens, last fall, quite late, and feared the queens were not fertilized as they laid no eggs. The Vice-President thought that if the queens were of proper age, they would likely be fertilized, as drones would be found about the apiary.

Mr. Nutt, of Iowa, said that they have more bees die in April than any other month in the year.

Mr. Martin had an occasion to take a frame from a hive in the middle of winter, and on doing so he found web and moth worm in the middle of the frame; how did it get there, in a strong colony at that time of year?

A motion was made and carried to insert in our premium list a premium for extracting honey. By some it is thought better to go in winter quarters with old bees than young ones.

C. M. KINGSBURY, *Sec.*

For the American Bee Journal.

Care of Bees on Sundays.

WM. H. BALCH.

All animate creation develop, mature and decay regardless of any day, it being only a matter of time. Trees bring forth fruit, fields yield their harvest, flowers secrete nectar to be taken up by insects, or "wasted on the desert air." But man, formed in the image of his Creator, a little lower than the angels, requires more; food, raiment, and many other things; with the rest, wild and domestic animals, all more or less, in different ways, contribute to his happiness and support. With the latter there is a certain amount of care and labor to be bestowed, in order that we may reap the full benefit for them to serve the end for which they were created. Who would think of leaving the faithful horse or the patient ox after their week's toil, from Saturday night until Monday morning without food or water? What would be the result if dairymen should not milk their cows or feed them on Sunday? It seems needless to multiply words on the subject, when we consider the small amount of necessary time required for the care of our bees on Sunday, when compared to that of other domestic animals.

Oran, N. Y.

[Discussions involving religious views, of which there are all kinds among bee-men, are out of order in the BEE JOURNAL. With this, therefore, let this subject rest, for, once begun, it would be an endless dispute, and no one would be benefitted.—ED.]

For the American Bee Journal.

New Facts from Old Theories.

B. F. CARROLL.

Proposition IX, Dzierzon theory: "All eggs germinated in the ovary of the queen develop as males, unless impregnated by the male sperm while passing the mouth of the seminal sac or spermatheca, when descending the oviduct. If they be thus impregnated in their downward passage (which impregnation the queen can effect or omit at pleasure,) they develop as females."

When this theory was first promulgated by the venerable German bee-master, it seemed so ridiculous that it could not be believed; but time has shown that this great master in apiculture was getting at the facts as they really existed. There are a few bee-keepers who yet doubt the truth of a portion of the Dzierzon theory.

I would state the proposition thus: All eggs germinated in the ovary of the queen, are coated over with a thin mucous substance, which receives the impregnating male sperm while passing the mouth of the seminal sac or spermatheca when decending the oviduct, and said male sperm can be removed by the nurse bees after the eggs are deposited in the worker cells, and the sex of the egg changed.

Holy Moses! do you intend to throw aside all well-authenticated theories, promulgated by such great lights as Huber, Rev. Dzierzon, Profs. Von Siebold and Leuckart, Baron of Berlepsch, and a host of learned bee-masters of the old and new world? No, my friends, I do not doubt one syllable of what these learned, scientific bee-masters set forth, but only wish to carry their researches a little further, if you please, making new discoveries in fields so rich with the thoughts of so many learned men.

To say that bees can change the sex of eggs at pleasure, is saying a great deal, but I think I can truthfully assert such to be true, as much so as a drone is the "son of his mamma." Understand me; a drone egg, that is, an unfertilized egg, will produce a drone always, and cannot be changed by the nurse bees, it matters not how hard the little fellows may try their mathematical skill; but, on the other hand, it is a simple operation for them to remove the male sperm from the worker egg just after the egg is laid, or just before the egg hatches.

I claim, friend bee-keepers, that if the egg is impregnated as it passes the mouth of the seminal sac when decending the oviduct, as the Rev. Father Dzierzon asserts, the male sperm is compelled to lodge in the mucus covering of the egg, and can be removed by the bees when the welfare of the colony demands it; and this seldom happens, unless a queen is suddenly killed by some mishap, and no drones left for mating with the young queen. And further, I believe the entire outer coating or covering of the egg is taken up in the development of the young larvæ; or, in other words, is a part of the milky substance seen when the egg is changed to a minute grub or larvæ.

And now for the facts in the case: I suspected this was the case in 1879, but was not positive about it until this and last year. To test the matter thoroughly, last August I took two new worker brood combs, built out on Given foundation in wired frames, and inserted them in the center of my Syrian colony containing one of D. A. Jones' best queens, and placed a Mason ½ gallon fruit jar feeder, filled with syrup, immediately over these frames to get the bees to cluster on them. Four days after, I take them out, and find them about half filled with eggs equally, on each side. I cut a hole, about one inch in diameter, near the center of the eggs in one of the combs; in the other, near the center, I scrape the cells off to the foundation for a space of 3 inches by one inch, and put both combs together in a strong queenless colony that had been especially prepared for this experiment, and had no laying queen for 2 weeks, having taken out a virgin queen 3 days before giving the frames with eggs; and, to be sure, I carefully examined the other frames and saw no signs of laying workers. I examined these combs every day until the brood was all capped. Around the hole 8 queen cells were drawn out, and all hatched nice queens, and near these cells a dozen or more cells were enlarged and drawn out for drones, from which I saw drones hatch, and this was the sole cause of the experiment. On comb number 2, was not a single drone cell; and on the comb containing the queen cells, the drone brood was on the same side of the comb on which were the queen cells, while the other side showed solid worker brood. I tried this experiment twice in 1882, and several times last year, and I invariably found some drone brood near queen cells.

These experiments were always in colonies where there were no drones or drone brood; and to further test the matter, I prepared a comb as above stated, and put it in a queenless colony containing drone brood and drones, without getting any drones on my prepared comb, although I got a nice lot of queen cells, which proved to my mind, that bees have the power to change the sex of eggs when the welfare of the colony demand it. It was hardly possible that the bees removed the eggs of the worker bee and deposited one in its place, for there was only 2 day's difference in the capping of the worker and drone brood.

This thing has been surmised by several of your correspondents, Mr. Editor, but I do not know how far they carried their experiments.

Now in conclusion, let me introduce three propositions, and I invite all bee-keepers to watch closely and see if I am not correct.

First proposition.—Bees change the sex of eggs (female to male only), whenever the economy of the colony require it.

2. Laying workers are found in nearly all colonies, hence a colony with a pure mismated queen may contain hybrid drones.

3. Queenless colonies containing laying workers will gladly accept a fertile queen or queen cell, if properly introduced.

Dresden, Texas.

For the American Bee Journal.

Successful Out-Door Wintering.

J. E. VAN ETTEN.

On page 56 Mr. O. O. Poppleton says: "Show me a practical method of keeping the entire inside of my hives perfectly free from dampness, and I have no further fears of unsuccessful wintering."

About 2 years ago I reached the same conclusion. I observed that wasps, hornets, flies and various-winged insects invariably sought a *dry* place in which to pass the winter, paying little or no regard to its exposure to a very low temperature. I observed flies issuing in the spring from iron door-locks, in which they had successfully passed the severest of winters.

I have also seen many "bee-trees" cut, and I observed that the bees seldom built their brood nest at the very top of the hollow, but almost always left an open space or hollow at the side or very nearly above their brood nest.

These various hints set me to thinking, and I came to the conclusion that bees could stand almost any degree of cold, if free from dampness. I made many experiments, and the more I experimented the more I became confirmed in my notion.

At last I thought I had solved or very nearly solved the problem of successful out-door wintering. Accordingly, last fall I took off the surplus sections from my bees, took out the sections and replaced the empty section boxes turned upside down, to give a dead-air space above the bees, and covered with enameled cloth and a thin woolen mat. One colony I left exposed without any case or cap surrounding or covering the frames. Over each I placed a "shock" of corn stalks, which I tied at the top.

The winter so far has been remarkably cold, the thermometer in January reaching as low as 20° below zero in this locality for several days in succession, yet my bees are all right. On the second day of February, I examined them and found them in the very best condition, and the colony without a case or cap quite as good as the rest, if not better. The bees were all bright, dry and clean, and not over a handful of dead bees could be found in any hive.

I have no further fears of successful out-door wintering. Keep away chaff and everything that will draw or hold moisture. Cover with corn stalks, set on end, tied at the top, and I will guarantee success.

Kingston, N. Y.

For the American Bee Journal.

The Winter Problem.

HENRY ALLEY.

I have read several of the articles on the above subject, that have appeared in the JOURNAL the past few months, and it strikes me that there is more or less theory in all of them. Much has been written about pollen being the cause of dysentery. Loss in wintering is not in my opinion caused by the bees eating pollen. It has not yet been made evident beyond a doubt that old bees eat it in the winter. The fact that bees will live without any pollen rather proves to me that they use but little, if any, unless breeding is going on in the hive. How is it that bees used to winter well on summer stands before patent hives and much other "scientific apparatus" were invented? Why, I know of a bee man here in Essex county (one of ye olden kind) who keeps 40 colonies, and he uses all kinds and styles of hives extant, except the movable frame. His bees are wintered on summer stands, and no extra preparation for winter is made. I hardly think he goes near them from fall until spring. Certainly he never knew anything about bees dying from eating pollen during the winter. He seldom, if ever, loses any in wintering, and when he does it is because they starve or lose their queen—a thing he knows but little about. Well, when I want some good strong colonies of bees, in May or June, I generally go to this man and get them, and he always has first-class colonies too. I usually find his hives full of bees, and well-stocked with new honey.

Now, does any one suppose that these bees do not have plenty of pollen in their hives? Of course they have it in abundance, as every hive should if the bees are to do well the coming season. Hundreds of colonies do not get an "early start" in the spring for want of pollen, and to this fact should be attributed, to some extent, spring dwindling. I am no convert to the pollen theory. The cause of loss of bees in winter, in my opinion, is owing more to the late gathered honey than on account of pollen, or all other causes combined. If we are to succeed in all cases in wintering our bees, the fall honey must be removed, as is now being done by many bee-keepers, unless known to be of a fine quality, which is the case when the weather is warm and dry during the fall months. Apiaries that are worked for surplus honey, and more particularly for extracted, have all the best honey removed in caps, or by the extractor, and when fall comes the bees fill their combs with honey of an inferior quality. There is not generally time, or the right kind of weather to properly ripen it so late in the season. Hence, long before spring, the unripe honey will sour in the cells, run out and daub the combs and bees. Dysentery sets in, and before the weather is warm enough for the bees to fly, hundreds of colonies have perished. Bees will not do much work inside the hive unless the weather is sufficiently warm for them to fly; and for this reason the soiled combs are not cleaned, and death to all is the inevitable result.

When bees are managed on the plan which has proved so successful in the case of my friend above alluded to, there can always be found in the hive plenty of early gathered honey; hence, one of the reasons why this particular lot of bees winter as well as they do. And, again, perhaps flowers that yield honey in the fall unfit for bees to winter upon, cannot be found in that particular vicinity, and the bees are not compelled to subsist six months on a poor quality of honey.

Something new will soon be developed regarding the winter problem. I predict that in less than three years a plan will be devised for wintering bees on dry sugar candy. Of course there will have to be plenty of water at hand, as the bees would soon starve on the sugar alone.

The right kind of a feeder has been devised, and some other things necessary to make this new idea a success have been experimented upon. When it has been demonstrated that bees will winter in a temperature of from 60° to 90° then the winter problem will have been solved. I have known for 25 years that bees can be wintered on sugar syrup without a particle of honey, but the plan I have suggested is to winter them on dry sugar, that is, candy made by boiling sugar in water until the moisture has all evaporated, when it can be run into cakes or frames to be placed in the hives. I am certain that bees can be wintered by this plan, and if I am alive another year will try the experiment. But I will not try it in a room where the temperature stands at 90°. I think 50° or 60° is as warm as will be necessary. The room should be just warm enough for the bees to work the sugar and water. If my time is not too much taken I may say more on this point by and by.

Wenham, Mass.

For the American Bee Journal.

Controlling the Queens.

W. R. GRAHAM.

I send a slip from the Texas *Patron*, published at Crockett, Tex., by Rev. P. W. Archer, of the Methodist Church, whose son, the Pastor of the M. E. Church, of Greenville, Tex., gave this slip to Judge Andrews and vouched for the statement, he having seen the astonishing feat performed many times by his father.

The executive committee of the Texas Bee-Keepers' Association, fully recognizing the wonderful statement, and the right of Mr. Archer to the realization of its value to our brethren, the world over, hereby extends the most cordial invitation to him to attend our next convention, when, if by gentlemanly courtesy and a fair compensation, the proprietor of this great secret can be induced to give it to the public, we expect to secure it. Here is the article:

"Probably no insects have been more carefully, intelligently and satisfactorily studied than the honey bees. Associations have been formed to discuss them, and books without number written; and it would seem that there are but few facts regarding them which are not well understood; and well have they repaid the study and toil that have been given them. A man that permits himself to become interested in this department, soon finds himself quite infatuated with the study of these truly wonderful insects. There are yet, however, many facts regarding them that have not been discovered, and some that have not been given to the public. Among them is this: It is possible to go to any thriving colony of bees, and without touching the hive, or in any way disturbing the colony by force, or the injection of any foreign substance within a few minutes, to cause the mother or queen bee to come out upon the resting-board and suffer herself to be taken up and carried away. We repeat, for emphasis and distinctness, that this writer can locate himself beside a colony of bees, and within five minutes cause the queen bee to come out and allow herself to be captured. Others may be able to perform a similar feat, but if so, we have never read or heard of it; and certainly it is not by the plan referred to. This was an accidental discovery of the writer, and by the simplest means imaginable."

For the American Bee Journal.

Adulteration of Beeswax.

S. J. YOUNGMAN.

I see that the Michigan State Convention brought out considerable discussion on the beeswax question. I think it an importact one, as wax is getting higher in price, and cannot always be readily found when wanted, causing serious loss and inconvenience to the bee-keeper at a critical time.

I think the idea of mixing paraffine or any other substance with wax for comb foundation should be discouraged, even if it should be successful. It would soon raise the hue and cry of adultuerated honey; besides, it would be the means of causing serious trouble to the bee-keeper at the hands of careless and dishonest supply dealers. There is some wax that will not stand any adulteration, as it is alalready too soft, either of its own nature or from the effects of using paraffine or other foreign substance. As I had serious trouble the past season with foundation purchased of regular supply dealers, but I do not think for a moment that they were guilty, even if the wax was adulterated, as it would be as much as any man's reputation was worth to be proven guilty of such an imposition. The foundation in question was very nice to look at, made of the nicest light wax; not a speck visible to the eye, and ran about 6 feet to the pound. After leaving from ½ to ¾ of an inch space between the bottom bar and foundation, it would stretch or sag, rendering it necessary for me to cut off from ½ to a full inch after the combs were filled with brood and honey, causing a vexation of spirit which I do not care to have repeated again, and which all bee-keepers should abstain from.

I think there will be great improvement in the production of wax in the near future, and there is certainly a great need and chance for it, as there are great quantities wasted by the bees for the want of an opportunity to store or build comb of it, especially where foundation is used. One has only to notice the wax scales at the entrance of a populous colony of bees. I have often picked them up with the point of a pin, and thus soon get a small chew of pure wax. The loss in this way, by the scales dropping off the bees during the honey season, must be enormous, and if saved there would not be such a dearth of wax as now exists. I also think that bees would often profitably build comb if allowed to do so, especially in the spring while stimulative breeding is progressing. The bees secrete wax during a honey flow, whether they are building comb or not, and if they are not employed building comb, this wax is most certainly lost.

Although not having the experience that Mr. Doolittle has, my own agrees with his; it is an undecided question as to whether it pays at the high price of foundation, to use it exclusively. During the past season I had quite an experience in the matter of comb building—my supply of foundation running out—and as I could not get any for about two weeks, I was obliged to use frames with only very narrow strips of foundation, from ½ to 1 inch in width, both in building up nuclei, and in full colonies. I found that nuclei could be profitably employed, and built nice straight worker combs where they would have done nothing if left to themselves.

With the full colonies comb was built very fast, but was nearly all drone comb, which I think of no value to the bee-keeper only to melt into wax. The building of an excess of drone comb seems to be the only drawback of getting nice straight combs, and I think fully as cheap as by the use of full sheets of foundation. There seems to be a large quantity of bees in the hive at all hours; would they not be building comb if comb was needed? Bees also build great quantities of comb at night; large sheets being built in a single night by new colonies. I would also like to say, while on this subject, that I think it unwise for bee-keepers to demand so fine a quality of foundation, especially for brood frames, for the dark is as good, and will be received and be built out by the bees as soon as the bleached, and is undoubtedly tougher and less apt to be adulterated, and it will be often noticed that when the bees build natural comb, it will often be far from white in color.

Cato, Mich., Jan. 4, 1884.

For the American Bee Journal.

A Queen Eleven Years Old.

S. H. HARRISON.

I am a reader of the BEE JOURNAL, and I must say that I have been many times repaid for time and money invested. I am an amateur in bee-culture, and have no lengthy theories to advance.

In the spring of 1882, I had one good colony of bees, which I had wintered in the cellar. In the fall I had 5 colonies. I put them in the cellar to winter; I colony proved to be without a queen, and perished soon after placing on the summer stand, leaving me 4 colonies, which were in good condition last spring. They have increased to 10, which are now in the cellar in apparently excellent condition. I got some surplus comb honey.

I purchased the first colony of J. T. Godding, now residing in Washington County, Kans., who started his apiary in Nebraska, where he purchased an imported Italian queen with both her wings clipped very short, and said to have been three years old when he purchased her. He has now owned her eight years, and she fills her hive with young bees now just as well as she did eight years ago. He claims that there is no mistake as to her idenity, for he knows her when he sees her just as certainly as he knows a horse or a cow which he has owned for that length of time. I saw him a short time ago, and he said: "The old queen went into winter quarters with as strong a colony as he had in his apiary." He claims that the queen I purchased is from the old queen; at least nine years old when she laid the egg from which my queen was reared. Is not this a little out of the regular order of theories?

Mankato, Kans.

[There surely is some mistake about it.—ED.]

For the American Bee Journal.

The Use of Comb Foundation.

F. M. TAINTOR.

On page 612 of the BEE JOURNAL for 1883, Mr. James Heddon says "that bee-keepers are now the greatest consumers of this, one of their own production, beeswax. In getting their wax to the foundation mills and back home, does it pay them to have the grocer, peddler, commission merchant and general dealer in wax, each take a margin of it? Just think the matter over and form correct conclusions." I think Mr. Heddon just right in regard to the peddler, commission merchant, etc., each taking out a margin. I believe, and would advise every one who has 20 colonies or more, to own a foundation machine, for I think that foundation fresh from the mill is worth nearly double that which is 2 or 3 months old, besides having it when you want it. I believe that everybody can afford to use foundation, even at a dollar a pound, if it could not be obtained for less.

There are several good machines made, but I prefer the Vandervort, although I think the Given press has many good points. I was as much surprised as was Mr. Caldwell to know that Mr. Doolittle did not use foundation. I guess Mr. Doolittle will think that I am extravagant, when I say that as long as I can buy beeswax for a dollar a pound or less, I shall use foundation.

Elm Grove, Mass.

For the American Bee Journal.

Rabbets for Hives, etc.

THOS. GORSUCH.

On page 28, Mr. Heddon gives J. W. R. a very good way to put in metal rabbets, or rather strips of tin. I have tried Mr. H.'s plan, and I will tell you in what way I have improved on it. In place of using a ¾ strip of tin, I use a strip 1⅛ wide, and fold or turn down one edge ⅜ of an inch flat; then nail it on with the folded side next to the rabbet. The advantages are, it makes the tin stronger, and leaves no cutting edge to cut one's fingers and the chaff division-boards where used (we use no other kind), and it is much easier to put on, as the folded edge serves for a rest until it is nailed.

Is this not something unusual? On July 2, colony No. 24 swarmed out, or rather sent out a swarm, but before the bees all clustered, they commenced to go back, and soon all were home. On July 9 I found a cluster under the hive (our hives are all placed on stakes) that appeared to be working; on close examination we found three combs the size of a man's hand, and the centre one filled with eggs. This must have been the old queen, as it was the first swarm. We tried to hive them, but the bees, when we applied the smoke, went into the hive and remained there. Every bee-keeper should get an apiary register and see how easily it is to keep run of the queens, etc.

Gorsuch, Pa., Jan. 29, 1884.

To Bee-Keepers of Illinois and Iowa.

The regular annual meeting of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Moore's Hall, No. 110 East Third street, on Thursday, Friday and Saturday, Feb. 21, 22 and 23, 1884.

Mr. T. G. Newman, of Chicago, editor of the Weekly BEE JOURNAL, will be with us, and has been engaged to give two lectures on "Bee-Keeping" on the 22d and 23d.

It is hoped that the members of the Association, and others will bring or send honey, apiarian supplies, etc. Any shipment of these, sent to Mr. Israel Hall, Treasurer of the Bee-Keepers' Association, Davenport, will be taken from the express office, removed to the Hall and cared for.

Also be ready to report results of last season's work.

Invitation is hereby extended, not only to the members, but also to their friends.

We want you to just swarm.

J. V. MCCAGG, *Pres.*

I. J. NAGLE, *Sec.*

☞ Columbus Bean, of Cape Girardeau County, Mo., says about five years ago a swarm of bees took up their abode in a hollow tree that stood a short distance from his door. They have gathered honey from year to year since that time without molestation. The other day, when the snow on the ground afforded a good chance to cut the tree and save all the honey, Mr. Bean rallied a party and soon had the biggest lot of honey on hand that a bee-tree ever afforded. There was a deposit of honey for 14 feet up the hollow of the tree, the "take" amounted to about 175 pounds.—*Missouri Republican.*

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Light and Heavy Foundation.

Will Mr. Heddon please answer the following questions?

1. In view of the advance in comb foundation, and scarcity of beeswax, would he have foundation, intended to be put on wired frames, heavier than 6 or 7 feet to the pound? I believe the greater weight of foundation made for brood frames was intended more to prevent sagging than to supply the necessary amount of wax to finish the cells.

2. I have, late last fall, used sheets of foundation made on the Given press, hand wired, and put in foundation running 7 feet to the pound, and believe that the bees have added no wax.

3. Would you advice the dead bees to be removed from the cellar floors, where large numbers of colonies are wintered in one cellar, say once or twice during the winter?

L. L. Triem.

La Porte City, Iowa.

1. We find by experiment that with Given foundation, the bees usually use to good advantage, all the wax that we give them in sheets, Langstroth size, that run about 5 sheets to the pound. The base is thin, and the side walls soft; and such a sheet will draw into comb whose cells will be brooding-depth, without any addition of wax from the bees, whatever.

2. I am not sure but what you are correct in this statement.

2. While it may not do any good, it certainly could do no harm to so remove the dead bees, provided you do it so quietly that they are not aware of your presence.

Was it Caused by Pollen?

To-day the thermometer stood at 51° above zero, in the shade. I threw the hay off the bees to let them have a fly, as there are only little patches of snow on the ground. I found them all in good condition but one colony, this one the lid had been left off last fall, the cap filled with sawdust, and some hay thrown over it, so it was not noticed: but not enough to keep the rain out. This colony had the dysentery badly, while the remaining 64 colonies showed no signs of it. Was it the dampness that caused it, or the eating of pollen?

H. Clark.

Palmyra, Iowa, Feb. 1, 1884.

I think it was caused by an excessive accumulation of fœcal matter, such as pollen, either solid, or floating in the honey. I am not aware that any such substance exists in water or dampness. Mr. Reynolds, of Cassapolis, Mich., carried about 25 colonies through the winter, 3 years ago, when others about him lost heavily. Nearly or quite all of his colonies showed some signs of disease and depletion, except two that got very wet because of a leaky roof. Have you already forgotten about Mr. Balch's splendid success in the damp, moldy cellar, the same winter of our great failure in our exceedingly dry one?

Queries from a Beginner.

I am a beginner in the bee business, and would like some advice. On Oct. 2, a neighbor gave me two late swarms. I put them together in a Simplicity hive, and let them settle the queen business themselves. I suppose it was a case of the "survival of the fittest." They had no brood and no honey. I fed them nearly 25 pounds of granulated sugar syrup. They capped part of their stores. I put them in the chamber over the kitchen, where there is a coal fire night and day. I closed the hive with wire netting. I see, Mr. Heddon, you disapprove of this in cellars. Shall I open the hive? They are very uneasy in moderate weather, but are strong and healthy yet, for anything I can see. Shall I give them water? At what time shall I begin feeding to start brood rearing? Please answer in "What and How." I have some outdoors packed in dry forest leaves. They were humming a week ago. The weather is very cold.

Martha A. Dobbin.

Lake, N. Y.

I am not sure that the restlessness of your colony, whether caused by high temperature or imprisonment, will injure it in the least, when their food is pure white sugar syrup. I look upon anything that excites the bees in winter, as having too deleterious effects. It will aggravate dysentery and increase consumption of food. I think there is no dysentery among your bees as you have removed the cause, and the excitement cannot aggravate what does not exist. If I desired to stop the excitement, I would put them in a cool cellar.

Moving Bees 40 Yards.

Will Mr. Heddon please answer the following question in the Weekly Bee Journal?

At what time, and which would be the most successful way to move an apiary of 70 colonies about 40 yards, to keep bees from returning to the old stand and insure success?

G. W. Sullivan.

White Cloud, Kans.

I should prefer such time as when the bees had been confined for some time before the removal, and when they could fly immediately afterward. A good time to move them is in the night. Clear away all land marks connected with the old yard; scatter a few heaps of some old straw or corn stalks about the yard; get up in the morning before the bees do; lean a short board about a foot wide against the hive, right in front of the entrance, so that the bees will have to fly out around it to get out. Just before they are ready to commence flying, smoke each colony, and drum on the hive a little. Also set the heaps of straw in the old yard on fire, just previous to smoking the bees, and have a grand smuge in the air during the next few hours. This plan will work, even if the bees flew the day previous to removal.

The Granulating of Honey.

Please tell us through "What and How":

1. Can white clover and basswood honey be prevented from granulating by sealing it up when extracted, or must it be heated?

2. If so, to what degree?

3. Will heating change the flavor?

4. Can honey be properly ripened or evaporated by keeping it in the open air or sun, in unsealed cans?

5. How can I tell when it is properly evaporated?

6. Can you give me any test?

Subscriber.

1. Sealing up honey does not prevent its granulating. Heating it will bring it from the granulated to the liquid state, but a continued low degree of temperature will cause it to granulate again.

2. Honey should never be heated to a degree above the boiling point of water, and not held at that degree any longer than is necessary.

3. Heating honey will change the flavor, and color also, damaging both if heated to a high temperature.

4. Honey sometimes improves in consistency by standing in small open vessles in a warm airy place, but while the warmth favors evaporation, it also favors bacterious development, which gives the honey that disagreeble twang. There seems to be no receptacle for honey as good for the purposes you mention as the capped wax and cells, and no place better to keep them than in the hives. Honey is properly evaporated when it is thick, rich and smooth. How thick? Why, thick, heavy or dense enough to hold a rich, oily flavor. Instrumental tests are not necessary, nor as practical to the producer as a little experience-knowledge. We used tact instead of talent in this case, because it can be so much more readily wielded.

Sections, Cases, Dysentery, etc.

Bees have been flying to-day for the first time since last fall. I have one colony of bees packed in chaff on the summer stands, to see if they can stand 38° below zero. So far they are all right. I see some signs of dysentery in the cellar in four hives. My cellar is too warm, 43°. It should be 38° to keep the bees in the cluster. My bees were put into the cellar Oct. 26; sixty-three colonies of bees nearly all strong. They will not get a fly until the last of March, if I can manage to keep them in without loosing too many.

1. Will fresh air make bees uneasy, while in the cellar?

2. Is there two kinds of dysentery?

3. If I fill your section case with sections full of foundation, and put them on the hive, will the bees enter them at once, or do they want some comb?

4. How many of the 28 sections in your case is not capped over, on an average?

5. Will foul brood spread by the sale of queens and comb foundation?

6. If I fill wide frames with sections and put them in the upper story and raise a comb of brood from below at the beginning of the honey harvest, will the bees go to work in the sections and cap them in good shape for market?

7. Have you or any one else weighed bees that were filled with honey to see which kind of bees brought the largest load of honey? FAYETTE LEE.

Cokato, Minn., Feb. 1, 1884.

1. I have known a sudden influx of fresh air to arouse bees, and perhaps sometimes to their detriment. Pure fresh air is an essential to human health, but how much so to the health of bees, is yet an unsettled question.

2. I think not.

3. My experience is that the bees will enter them and draw the foundation (if it is a good article), as soon as there is any flow of honey to store.

4. During the honey flow we usually leave our cases on until all is finished, without experiencing any loss or coloring of the honey by so doing. In some instances, however, we see the need of removing a case with 3 or 5 cases unfinished. After removing enough of such cases that the unfinished sections amount to 28, we put them all in a case together, and put them in a right place to be finished together. In removing all at the end of the season, of course we take them off in all stages of development.

Undoubtedly foul brood has been many times introduced with the introduction of queens from foul-broody apiaries. My opinion is, and it is well grounded and quite positive, that foul brood is not carried in the traffic in comb foundation; the degree of heat to which the wax is heated in making foundation, is too high to leave a possibility of the spores surviving it.

6. My experience with this method of manipulation is, that brood and bee bread are more apt to get into the sections, with such a system. The cappings of the sections are more apt to be darkened by the bees, when they are filled and finished in close proximity to dark brood combs. I can see no need for such manipulation, and think where such is needed, the rest of the system is very faulty.

7. No, we have no adequate scales; besides there would be great variance with members of the same family. We have many times weighed the aggregate results of colonies of about equal numbers, and made our preference in races and strains in that manner.

SELECTIONS FROM OUR LETTER BOX

Bees in Fine Condition.

I have 100 colonies in the cellar, and another lot packed in chaff; all seem to be in fine condition. A good many colonies, in this vicinity, not protected, have succumbed to the zero weather. L. HUBBARD.

Waldron, Mich., Jan. 30, 1884.

Bees Carrying in Pollen.

My bees commenced to carry in pollen on the 3d inst. from several sources; I think from red-bud, willow and arbor vitae. I have now 81 colonies all in good condition. Some small nuclei have, so far, wintered well out-of-doors, with very little protection. I usually have drones flying about March 20. I will stimulate a few colonies by feeding, so as to have drones a little earlier this season. I will commence to rear queens early in March. I am much encouraged in bee-keeping here, and think it can be made profitable to a moderate degree in almost any locality. I have known in the South. O. F. BLEDSOE.

Grenada, Miss., Feb. 6, 1884.

Bees Fed on Sugar Syrup.

The mercury got down to 24° below zero here, which is, perhaps, about 15° colder than it has ever been in this part of West Virginia. We begin to get anxious about our bees, which were left on the summer stands, one-half of them in single-walled hives, but the last few days have been warm enough for them to take out-door exercise, and they are in fine condition. The queens have been laying, and in some colonies sealed brood is found. All the honey was taken from 2 colonies last fall, and then they were fed on syrup made of a rather cheap grade of brown sugar, and a small quantity of dark honey mixed with the syrup. These 2 colonies showed an anxiety for a cleansing flight, and as the temperature began to get nearly right, and a little before the other colonies made any stir, they were flying from their hives in a way that indicated that they could not much longer have continued healthy. For open winters, or for climates admitting of frequent flights during the winter, the cheaper foods will answer, but where long confinements may be looked for, the safety of the bees demand well-ripened honey or granulated sugar syrup. J. A. BUCHANAN.

Holliday's Cove, W. Va., Feb. 4, 1884.

Irascible Cyprian Bees.

Are they vicious in the apiary if not molested, or is it just when the hive is opened? Do they go far from the hive, when disturbed, to sting any one? How long does it take them to settle down after being disturbed?

Columbus, O. P. E. BLESCH.

[It is reported by those who have kept and abandoned them that they will follow any one even in the house when on the rampage; also, that they are not soon quieted, and they do not wait for being disturbed before making the attack. We had an imported Cyprian queen, and found her bees so irascible that after a few months we superseded "her ugliness" by an amiable Italian queen. No more Cyprians for us.—ED.]

From the Cottonwood Apiary.

My 60 colonies are all alive and in good condition. They have been flying for the last two days. They did well last summer. I had half an acre of melilot clover which bloomed for six weeks; the bees worked on it all the time. I sow my melilot clover on the first of May. I am going to sow several varieties of seeds, this season, for my bees. I would not do without the BEE JOURNAL for twice the price of it. N. DAVIS.

Emporia, Kan., Jan. 30, 1884.

Preparing Bees for Winter.

I put 29 colonies in the cellar Nov. 26; left one colony on the summer stand, in a Simplicity ten-frame hive; I took out two frames, the ones containing the most pollen, leaving the bees on 8 frames. I use no packing, only an enameled sheet over them. They had a fly Jan. 13, and another to-day. I examined them to-day; they are doing well; there are very few dead bees outside, and no signs of dysentery. For the bees in the cellar, I use no packing except an enameled sheet; over some wooden mats, and some without any cover on the frames. I took 8 colonies out to-day for a flight; examined them and found them all in good condition, not a sign of dysentery; all of them were damp; the water running out of some of them: in two of them the combs were covered with mold. I use no ventilation in my cellar, but it is frost-proof, unless on nights like Jan. 4, when it pinched the leaves off of some flowers. The thermometer then registered 32° below zero on the morning of Jan. 5. It never goes above 45°.

RICHARD GRINSELL.

Baden, Mo., Jan. 30, 1884.

Report of a Beginner.

I bought one colony of pure Italians in the spring of 1882. It was dry during the summer, and they hardly gathered honey enough to winter on. In the spring they increased to 3, and gathered about 90 lbs. of comb honey. They are now on the summer stands, protected with chaff cushions. My father takes the BEE JOURNAL for me to read. I like it very much.

S. F. DAILY.

Mt. Hope, Kans., Feb. 5, 1884.

Bees "On the Wing" Again.

My bees were all "on the wing" yesterday; it has been 35° below zero in this county. It made me feel rather sick to have the little fellows out in the cold. I had 6 weak colonies in the cellar. There are 14 colonies in Gallup hives with dry leaves over them, and 64 in Langstroth hives without any protection but the honey board. They are all nice and dry. I think that it is the main thing, to keep our bees dry all the time. I sometimes think that chaff hives and cushions are of no use in wintering bees, when they come through just as well without. An American hive of black bees which I sold in 1882, came here in 1877 from Iowa, and never had any protection that I know of, and this winter they are still out-of-doors, 3 feet from the ground, I should think. Now this same old colony of bees gathered 75 lbs. of surplus honey last year. My son took it off.

JAS. JARDINE.

Ashland, Neb., Jan. 14, 1884.

Button Bush Honey.

I noticed R. S. Becktell's article in reference to button bush honey, and at the time intended to write out my experience with that kind of honey, but it slipped my mind, until I read in the BEE JOURNAL of Jan. 10, what the Rev. M. Mahin, D. D., said of it. I could no longer delay for my experience with this honey agrees with Mr. Mahin's to the letter, except the granulation. I cannot say as to that, for my honey was all in the comb. About one mile south from my place is an old sawmill pond of about 25 or 30 acres in extent, in which is a thick growth of button bush, except a narrow channel through the centre; the water is shallow, only from 2 to 4 feet deep; up to about four years ago this bush blossomed very full, and my bees had a very busy sweet time, for a week or ten days; and the way they carried in the honey, and such honey too, was enough to make any bee-keeper feel good-natured. During the winter of 1879-80 this shrub seemed to have badly winter-killed, since which time it has blossomed very little, and my bees are cut off from one of their best fields. I can endorse what the Rev. M. Mahin says of button bush honey, as with me it was very white and of good flavor.

ROBERT DOWNS.

Naugatuck, Conn., Jan. 28, 1884.

Artificial Queens.

I have 45 colonies of bees on the summer stands, in excellent condition. I could never get along without the BEE JOURNAL. On page 67, Mr. Editor, you say "we have no use for the word artificial, in all the vocabulary of bee-keeping." Well, let us see about that: A year ago last summer a man stepped into my apiary to see me work with the bees. I was dividing for increase at the time, and he had a great many questions to ask. He asked me what I was looking for. I told him, the queen; he asked me whether I ever used any "artificial queens," made out of wax. After I recovered from laughing, I told him no, I had never used any artificial queens as yet. Well, he said he had heard of the like among some of the old-fashioned bee-keepers, and the bees did well. I positively was asked that question once before. Now, Mr. Editor, I will just ask you whether you would not call such queens artificial?

S. F. MILLER.

North Manchester, Ind., Feb. 6, 1884.

[Yes; of course, such a fraud as "a wax queen" would be entitled to be called artificial. One of Webster's definitions of the word would just fit that idea—thus: "made or contrived by art, or by human skill or labor, in opposition to *natural*." Next time we expect to hear of bees working on artificial "wax flowers" as well as having an "artificial" wax queen! What "bosh"!—ED.]

Experience with Cellar-Wintering.

In the fall of 1882, I put 12 colonies of Italian bees in the cellar, and packed 26 colonies on the summer stands, according to Mr. Heddon's plan. They were packed in 5 inches of sawdust, with the frames covered with burlap, and top stories filled with wheat chaff. Now, for results. The 12 colonies wintered in the cellar were taken out on April 6, strong in bees and heavy in stores, and did exceedingly well, while the 26 colonies packed in sawdust, all died with dysentery, except 5. I have, at the present time, 18 colonies packed in chaff, 5 inches on all sides, with the top stories on and filled with chaff. I also have 27 colonies stored in the cellar. They all seem to be doing well now. I use the Simplicity hive with Gallup frames. My hive is 19½ inches long by 14 wide and 12 inches deep. I use 11 Gallup frames to the hive, and a rack which holds 20 one-pound sections, with a movable side, which I consider an improvement on the tight rack, as they are more easy of manipulation. I tier them up, making 40 on a hive, which is enough at one time. My bees are all Italians in their purity. I want no leather-colored Italians, which are nothing more or less than hybrids. If a man wants such bees, let him purchase a pure Italian queen, and he will get hybrid bees enough without buying them. I am much interested in the warm-cellar wintering of bees, as practiced by Mr. Ira Barber. I hope Mr. Barber will tell us more about it through the BEE JOURNAL.

E. W. WALES, 45.

Disco, Mich., Jan. 22, 1884.

A Square Deal.

MR. EDITOR.—In your article in the December BEE JOURNAL, on "Calling Things by their Right Names," where you criticize a writer who says his stands came out in bad shape, you seem surprised that he should convey the idea that the "stands" changed their shape, and ask, as an example, this question: "If the pieces of wood were nailed in a rectangular form, did they change of their own accord to a square shape?" Now, I would ask you: If they went into winter quarters in a rectangular form, might they not come out in the spring in a square shape, without changing in any manner? I think you will find that a square is always a rectangle, though a rectangle may not always be square.

ALSON MEAD.

Sedley, Ind.

[Mr. Mead is correct. We used the term in another sense. If we intend to "call things by the right names," let us have them right. "Hew to the line, let the chips fall where they may."—ED.]

My Report for 1883.

On Nov. 15, 1882, I placed in the cellar 36 colonies of bees, leaving 72 on the summer stands, in good condition. I lost 1 in the cellar, and 3 on the summer stands, by starvation, and 4 by spring dwindling, leaving 100 to start with, in the spring of 1883. Though the season was only an ordinary one for honey, my bees gave me a surplus of 4,000 lbs., one-half comb and one-half extracted, and an increase of 50 colonies. On Nov. 15, 1883, I placed in the cellar 66, leaving 81 on the summer stands, in good condition; they are doing well so far, this winter, though it has been very cold.

DANIEL WHITMER.

South Bend, Ind., Jan. 26, 1884.

Sweet Home Bee Feeder.

I send one of my bee feeders to the BEE JOURNAL museum, for the benefit of bee-keepers. I have tried different kinds, but think this is the cheapest and handiest of any I ever saw. I take a common tomato can to a tinner and get a cap of about 1½ inch diameter made to fit on a flange in the center of the end, the top of the cap being made of perforated tin. When filled, invert the can on to a block of wood about 4 inches square and 1½ inches thick, having a 1¾ inch hole in it for the projection with the perforated-cap to go into, and as this reaches only ⅝ of the way through the block, by cutting a ⅜ inch passage-way 2 inches wide, it serves as an entrance for the bees; when that cut-away side is placed against the entrance of the hive. The fixing of this can only cost me 10 cts., and holds 3 lbs. of honey. You can feed from 1 to 3 lbs., or from 3 to 30 lbs., just as you like; all you have to do is to put more cans on the hive. I have fed 4 colonies that I secured late in the fall from a farmer that was killing them for the honey. I had the bees late in October, and put them into hives with empty combs, and placed 10 of these filled feeders over the frames of each hive, and the bees carried it all below in 5 days. If you feed at the entrance, the robbers cannot get the honey, as only the bees from the inside can get to the honey. If the bees should leave it during a cold night, the honey will not run out, for if it is held level, it will hold water. You can feed at any time of the year. In winter, feed inside of the cap; turn back the corner of the quilt, or if you use a honey board, bore a hole in it to fit the feeder. JOHN REY.

East Saginaw, Mich., Jan. 31, 1884.

[This feeder is practically the same as several others, particularly the Kretchmer, which has been in use for nearly 20 years.—ED.]

Bees did not Suffer by the Cold.

I examined all of my 75 colonies of bees in my home apiary to-day, and all answered to roll call, although the thermometer has indicated as low as 21° below zero, and the bees have had no flight for about a month, yet I never saw bees in a more healthy condition under similar circumstances. My hives are double-walled, with air space between the walls. I use a rack with 2½ inches of planing-mill shavings on the top of the brood-chambers. I want the absorbing material so porous or open on my hives that the bees can breathe through it, even if the entrances to the hives are entirely shut up with snow or ice.

SAMUEL D. RIEGEL.

Adelphi, O., Jan. 23, 1884.

Bees Never Wintered Better.

I am satisfied that bees never wintered better than they have so far this winter. I have not lost a colony yet.

C. W. SAPPENFIELD.

Crawfordsville, Ind., Feb. 5, 1884.

Young Bees Flying Now.

My bees did well last season. I commenced, in the spring, with 120 colonies; increased 40, that is, I put back all second swarms and a good many first swarms. I took 1,000 one-pound sections, and 16,000 lbs. of extracted, and there is about 4,000 lbs. on the hives to take out in the spring, that I could not take out on account of a severe spell of malarial fever last fall. We had no winter up to Jan. 1. We had it pretty cold all through January. Bees carried in pollen on Christmas day, and I had drones flying on Dec. 28. They commenced carrying in pollen on Jan. 28, and are now working very fast on elms. I have young bees flying to-day. The honey crop has been an entire failure in Texas except in this and Brazoria counties. J. W. ECKMAN.

Richmond, Texas, Feb. 5, 1884.

Will Syrians not Sting?

In the *British Bee Journal* for Jan. 15, page 31, speaking of Syrian bees, John Hewitt, of Sheffield, says: "If you get a single sting from them just furnish an affidavit of the fact attested by two credible witnesses and sworn before a commissioner duly appointed to administer oaths, or a justice of the peace, that it was a Syrian which did it, or I shall not believe it?" Is this "talk" or truth? Can any American bee-keeper verify or disprove this Briton's statement? He professes, in a column article, that where smoke is not used to these bees, they are the most docile of all docile bees; in fact, so peaceful that you have to tread on one to make it sting; striking and jarring will not do it! It seems to me that American bee-keepers have been mistaken, even to the extent of *fancying* that Syrians stung them. Great Scott, what next?

R. J. KENDALL.

Austin, Texas, Feb. 5, 1884.

Bees Under the Snow.

My bees in my new hives are doing splendidly. The ventilators are all I can ask for them; my hives are on the summer stands, with entrances filled with snow, and the bees are snug and warm. While a colony in a double-walled hive, by the side of them, has perished with the cold. I have at present 45 colonies in good condition, but they have not had a flight since the latter part of October.

D. B. BROWN.

Des Moines, Iowa, Feb. 7, 1884.

Giving away Honey at the Fair.

I have just read the Michigan State Fair Premium List, and in regard to the giving away on "Childrens' Day" of 1,000 5-cent packages, should like to make this suggestion: That Messrs. Hutchinson and Cutting get as many of the little cans and labels as in their judgment will be called for, and let any bee-keeper send for as many as he would like to fill, with the privilege of inserting his name in a blank left in the label for that purpose, and I have no doubt there will be plenty of honey forthcoming to supply all the children. GEO. E. HILTON.

Fremont, Mich., Feb. 7, 1884.

Is Alsike Clover a Field Plant?

On page 44, Mr. Hugh Williams claims Alsike clover as a great honey plant, but he said it was no field crop. With his first sentence I agree, that it is a great honey plant, but that it is no field crop I beg to dispute, for I think that it is one of the best grasses that we can raise for hay; equal to timothy, if not better, as there is no fuzz on stem or leaves like on red clover, and rain does not hurt the hay in curing, as it does the red and Alsike clovers; it will not freeze out, like red clover. During the past season I made about 7 tons of hay from 3½ acres of Alsike clover. There should be some timothy seed mixed with the clover seed to keep the clover from lodging. My clover was from 2½ to 3 feet high, and every bee-keeper should sow the Alsike clover, for he would get two crops—a honey crop and a hay crop, and stock like both Alsike hay and pasture better than any that I have tried yet.

E. J. C. TROXELL.

Ft. Seneca, Ohio.

How to test Thermometers.

It is easy to test a thermometer. Take a vessel large enough to put the thermometer in. Surround and cover the instrument entirely with fine chopped ice, lying or standing makes no difference. Take the vessel in a warm room or near a stove, and let it stand till the ice melts. The point the thermometer shows is freezing point, or 32° below zero; or in other words, dip the thermometer in melting ice, it shows then freezing point.

CHAS. FAUST.

Harvard, Ill., Feb. 8, 1884.

Local Convention Directory.

1884. *Time and place of Meeting.*

Feb. 12.—Meeting at Janesville, Wis.
Mack & Fatzinger, Com.

Feb. 12, 13.—Convention at Arcadia, Wis.
E. A. Morgan, Sec.

Feb. 14, 15.—Maine State, at Lewiston, Me.
Wm. Hoyt, Sec.

Feb. 21-33.—E. Iowa, & W. Illinois, at Davenport, Ia.
J. V. McCagg, Pres.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

March 20.—Southern Indiana, at Madison, Ind.
H. C. White, Sec.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ At a microscopic exhibition in Boston lately the sting of a honey bee was thrown upon the screen, the point of which was so sharp as to be hardly distinguishable. At the time the finest of fine needles was shown, under the same power of the microscope, and the end of the needle measured 5 inches across.—*Exchange.*

THE AMERICAN BEE JOURNAL

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

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☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

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For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail. postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50. 500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ A correspondent asks if any one may select a Binder for the BEE JOURNAL, among the books given as Premiums for getting subscribers; we reply, yes, any book or binder we keep for sale may be selected by those who get up clubs.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ We now club the *British Bee Journal* and our Monthly for $2.50.

☞ Our friends will find this the season for securing subscriptions. We offer the premiums and they can easily secure them.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the BEE JOURNAL, on the first page of this paper.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., Feb. 11, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 15@21c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & CO.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—No material change to note. Demand for 1 and 2 lb. sections of white honey keeps up well for this time of the year, and prices fairly maintained at 17@18c. Dark comb honey very slow and not wanted. I am very low on nice 2 lb. sections, and could make pretty quick returns on a few choice lots. Demand for extracted fair at 8@9c. for dark fall; receipts light. I attribute the continued good demand for comb honey in this market to the careful overhauling and handling that I give it, thereby getting it to the country merchants in good condition, which encourages them to buy.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Strictly choice is inquired for in a small way, and for such the market is moderately firm. For common qualities there is little or no demand, and prices favor buyers. White to extra white comb, 15@18c.; dark to good, 9@11c.; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Selling quietly at steady prices; comb at 14@18c., and strained and extracted at 7@8c. Top rates for fancy small packages.

BEESWAX—Firm at 32@33c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.

BEESWAX—In great demand, but no supply; nominally 30c. per lb.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

◆

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*
Independence, Mo.

☞ We intend to organize a bee-keepers' association for Southern Indiana on March 20, 1884, to meet at the Merchants and Manufacturers' Club Rooms, Madison, Ind., at 9:30 a. m. Kentucky bee-keepers are invited to participate. H. C. WHITE.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

J. W. ECKMAN,
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For further information, send for Circular.
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Dadant's Foundation Factory, wholesale
See Advertisement in another column.

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And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t H. C. WHITE, MADISON, IND.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine.
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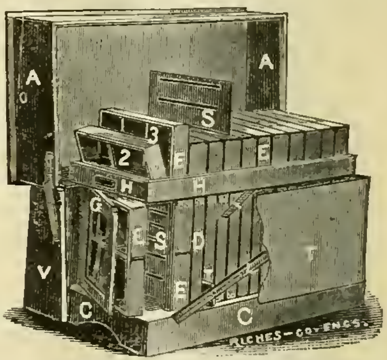

The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

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Prop'r. of the Crown Bee Hive Factory and Apiary,
JERSEYVILLE, ILL.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.
4A1y

Pure Italian Bees and Queens!
Send for Price List to
A. R. MILLER, Wakarusa, Elkhart Co., Ind.
7D6t

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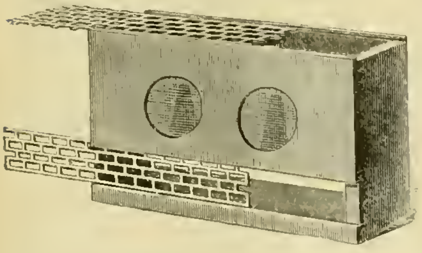
A Drone and Queen Trap, and Drone-Excluder combined.



This Trap is the only perfect-working Drone-Excluder yet devised. A piece of **perforated zinc** placed at the entrance of a hive does not exclude drones. It operates exactly the reverse, as, by such an arrangement, the Drones cannot escape, and the entrance is clogged by them during the busy part of the day. This is not the case with the Drone Trap, as it is so constructed that the drones enter a chamber out of the way, and may be preserved or destroyed as desired. No Queen can leave the hive at swarming time; and the new colony can be compelled to cluster where desired, so that the bee-master will not have to climb into a tall tree for his bees when the thermometer is from 90 to 100 degrees in the shade, as is often the case during the swarming season.

Sent by mail, postage paid, on receipt of **$1.10.** Liberal discount by the quantity.

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Send for Samples & Reduced Price-List.

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A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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$5,000 REWARD!

We want an agent in every town. Something new and profitable. Men, women, boys, girls send 2c. stamp for outfit. We offer **$5000** worth of premiums to our agents. Address,

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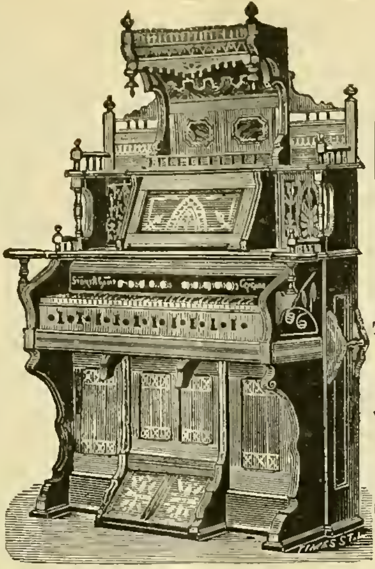
$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine. 4A1y



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ESTABLISHED 1845.

Our Annual Catalogue,

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Address PLANT SEED COMPANY,

Nos. 812 & 814 N. 4th St., ST. LOUIS. MO.

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Peck's Patent Tubular Cushioned Ear Drums cure Deafness in all stages. Recommended by scientific men of Europe and America. Write for *illustrated descriptive book* and testimonials from doctors, judges, ministers and prominent men and women who have been cured, and who *take pleasure in recommending them.* They are unseen while in use, comfortable to wear, and make a permanent cure. Address, **WEST & CO., 7 Murray St., New-York, Agents for South and West.**

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,

Langstroth Bee Hives, Honey Sections, etc.

Apply to **C. F. MUTH,**

976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

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(BEFORE.)

(AFTER.)

ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address

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See Advertisement in another column.

BEE-KEEPER WANTED.—ADDRESS, stating terms. C. WEEKS, Clifton, Tenn.

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A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, **DR. G. L. TINKER,**

44Atf NEW PHILADELPHIA, O.

$72 A week made at home by the industrious. Best business now before the public. Capital not needed We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time. You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & Co., Augusta, Maine. 8A1y

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

1868. 1884.

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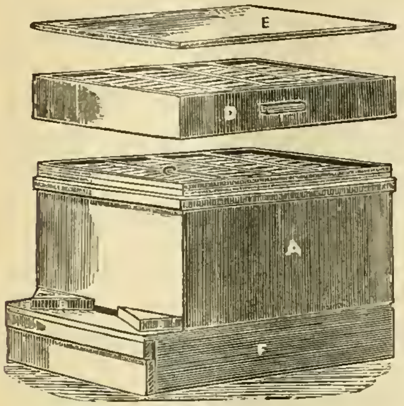

My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

Up to this date, Jan. 1, I have not been able to make any contract for any first-class Sections, and I neither use or sell any others. If I offer you any for 1884, you will see notice here. I have about 10,000 5x6x2 to spare now.

BEES.

We now have in winter quarters, in first-class condition, 350 colonies of bees, of our new strain, and of pure Italian blood. As most of you are aware, for six years past I have taken pains to breed my stock for markings of character, or qualities, rather than color, using as a base, the leather colored Italian and brown German bees.

On reading my Circular, you will find some testimonials from practical bee-keepers (a few saved from many received), that will give you an idea of how well I have succeeded. Our hives and combs are in good condition, and our bees have always been free from foul brood. I shall endeavor to send out a first-class line of Full Colonies, Queens, Nuclei and Bees by the pound. Parties wishing to start an apiary, or purchase on a large scale, as well as those who wish the choicest of my stock to breed from, may do well to correspond with me.

Among the goods we have to offer, are Standard Langstroth and American Frames in the flat, a complete line of Bingham Smokers and Honey Knives, Excelsior Honey Extractors, Wax Extractors, Plated Wire, for wiring frames, our new style Nucleus Hives, both made up and in the flat, Bee Veils, Sample Shipping Crates, Comb Foundation Fasteners, Surplus Honey Registers, our three styles of Bee Feeders (for which I have numerous testimonials), and various parts of our Hive.

STUDENTS OF BEE-CULTURE.

Those who may wish to spend six months in the theory and practice of Apiculture, may do themselves a service by writing for terms for 1884.

I send out CIRCULARS to those who solicit them, only, and when ordering, will you please be *sure* to state whether or not you have my Circular of 1883. I believe we have no patent on anything we make, use, or sell, except Bingham smoker and knife.

As in the past, we shall do our best to satisfy the reasonable, and deal out exact justice to all. Address all orders and communications to

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

BEESWAX.

I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

ALFRED H. NEWMAN,

WHOLESALE AND RETAIL DEALER IN

BEE-KEEPERS' SUPPLIES,

INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,

Honey and Wax Extractors, Comb Foundation, Kegs and Pails for Honey, Seeds for Honey Plants, etc.,

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CHICAGO, ILLINOIS.

Illustrated Catalogue sent free upon application.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax, the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

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Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

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Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

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925 W. Madison St., Chicago, Ill.

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861. Chicago, Ill., February 20, 1884. VOL. XX. No. 8.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, $2 a year; Monthly, $1.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free.*

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

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For either the Weekly or Monthly Editions.

A line of this type will contain *about* 8 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

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THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

CLUBBING LIST FOR 1884.

We will supply tbe **American Bee Journal** one year, and any of tbe following Books, at the prices quoted in tbe last colnmn of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
Tbe Weekly Bee Journal,	$2 00..	
and Cook's Manual, 7th edition (in cloth)	3 25..	2 75
Cook's Manual, (in paper covers)	3 00..	2 50
Bees and Honey (T.G.Newman) cloth	2 75..	2 50
Bees and Honey (paper covers)	2 50..	2 25
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	4 00..	3 25
Dzierzon's New Bee Book (cloth)	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
Alley's Queen Rearing	3 00..	2 75
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	6 00..	5 50
Blessed Bees	2 75..	2 50
King's Text Book	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Cultnre (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazlne (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
New Eng. Apiarian, (W.W.Merrill)	2 75..	2 50
British Bee Journal	3 75..	3 50
The 8 above-named papers	9 00..	7 75

Tbe **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ On account of the inclement weather, only a few of the Rock county bee-keepers responded to the call to meet at the Pember House, Janesville, Wis., on the second Tuesday in February, to organize a bee-keepers' association, so we will have another meeting on the first Tuesday in March next, at 1 p. m., at the same place. All bee-keepers are courteously invited, and we hope there will be a good attendance. L. FATZINGER.
Janesville, Wis., Feb. 13, 1884.

Advertisements.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made.

It is kept for sale by Messrs.
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DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
GEO. W. HOUSE, Fayetteville, N. Y.,
WM. BALLANTINE, Sago, O.
E. L. ARMSTRONG, Jerseyville, Ill.
and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect. CHAS. DADANT & SON,
5ABly HAMILTON, Hancock Co., ILL.

FDN. MILLS. 10 INCH $15.00
W. C. PELHAM.
MAYSVILLE, KY.
37A1y

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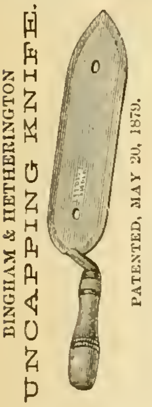
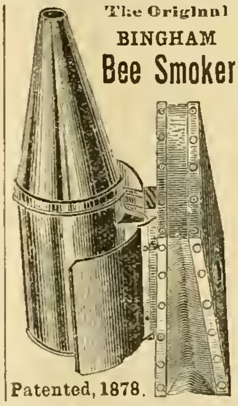
ORIGINAL PATENTS.


BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

BOOKS!

Sent by mail, on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

Dzierzon's Rational Bee-Keeping.—A Translation of the Masterpiece of that most celebrated German authority, by H. Dieck and S. Stutterd, and edited, with notes, by Charles N. Abbott, *Ex-editor of the "British Bee Journal."* Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon....has probably made greater strides in scientific apiculture than any one man...For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, **$2.**

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. **Price, $1.00**

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means can afford to do without. Cloth, **$1.25**; paper cover, **$1.**

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.**, postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.— This pamphlet discourses upon the Ancient History of Bees and Honey; the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **5c.**; per dozen, **50c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price **35 c.** postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. **40** cents.

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Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use— Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root —This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee. —This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.— A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.50; for 200 colonies, $2.00.

Deutsche Buecher,
Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände —Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin —Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs ſür den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Arſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

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THE AMERICAN
BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

The Honey Bird of Africa.

In the *Kaleidoscope* of February, we notice the following concerning birds and honey in Africa:

In the flower grown forests of Africa, there lives a curious little bird called by the natives, the honey bird—not because it gathers honey, but because it is so fond of eating it. This bird is gifted with a peculiar instinct that enables it to find the nests of wild bees that are hidden in hollow trees and little caves in the rock, and many a battle it has with the enraged bees before it can enjoy the banquet of honey. When it scents a nest of honey it utters a peculiar cry, which the natives have learned to know; and the honey hunters (men who make a profession of hunting wild honey) find in the birds an invaluable guide to the well hidden hives. All the man has to do is to follow the cry of the honey bird, and he is sure to find a nest of clear, sweet honey. A pretty little poem written about these honey birds contains this beautiful moral:

> "We cannot all make honey,
> But some can find it out
> And show the hive to others—
> A gracious thing, no doubt,
> And in the world of thickets
> And brambles, if you please,
> One likes to know the birds
> Who are neighbors to the bees."

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☞ Mr. H. Scovell, editor of the Kansas *Bee-Keeper*, Columbus, Kans., was married on Jan. 20 to Mrs. S. E. Murphy, of Galena, Kans. The BEE JOURNAL extends congratulations. May the union be happy and prolonged.

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☞ We can supply all new subscribers and renewals with the numbers from the beginning of the year, and shall do so unless otherwise ordered—presuming that it is so desired.

Old & New Methods of Bee-Keeping.

At the Farmers' Institute of Brown County, Kansas, held last January, Mr. J. W. Margrave, of Hiawatha, Kans., made the following remarks as we notice in an exchange:

Mr. J. W. Margrave, to open the subject, spoke of the old time methods of obtaining surplus honey, viz: from a few log "gums" kept around under the apple trees and among the weeds in harvest time to get a little honey. The bee-keepers would, with a hatchet, break off the cover, tearing the honey to pieces, cut out a plate full to set on the table, thus drowning many of the industrious workers and leaving the hive in a very deplorable plight for the bees to fix up as best they could—which the little industrious workers would at once proceed to do. Then, in the fall season, the bee-keeper would select a few "gums" to be "brimstoned to death" by making a hole in the earth large enough to set a small pot in with burning sulphur; then snatching up one of the doomed colonies, he would set it over the pit, and in two or three minutes all was still; not a living bee within to try to sting its merciless keeper. He then spoke of the sickening mess of stuff squeezed out, bee bread, young bees, etc., and called strained honey. This was contrasted with the clear, clean extracted honey of to-day, free from all impurities, nothing but pure honey.

He spoke of the magnitude of the industry; that the statistics for 1882 showed the honey and beeswax trade reached $32,000,000.

That Mrs. Sarah J. W. Axtell, of Rosehill, Ill., marketed that same year from her apiaries 39,000 pounds of honey in the Chicago market. That Jerome Twitchell, of Kansas City, sold in that market, last year, 75,000 pounds of honey, and reports that he is not able to supply his trade this year.

He stated that the annual product under old-time management did not average more than 10 pounds per colony, and under the improved methods it was not uncommon to get from 50 to 100 pounds.

He then spoke of the diseases to which the honey bee is liable; he also spoke of the most prolific honey plants of this region of country

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☞ Letters for publication must be written on a separate piece of paper from items of business.

☞ Quite a number of our readers, when they see articles in the BEE JOURNAL from prominent bee-men, feel at liberty to write them, asking lots of questions. Perhaps this is all right, if they feel like giving their time to the common cause; but those who write thus, should invariably enclose a stamp, if they desire a reply. Two or three stamps are nothing, of course, but where a person has ten or a dozen a day to answer, it amounts to considerable in the course of a month. One of our correspondents lately said, "I have taken 40 letters from the mail this morning," and many of them expected replies, but generally did not contain a stamp to pay the postage on it. Therefore, we would say to all, when you ask questions of writers for the BEE JOURNAL, be sure to enclose a stamp for reply. This is but fair and just.

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Catalogues for 1884.—The following new Catalogues and Price Lists are received:

J. V. Caldwell, Cambridge, Ills., 4 pages—Apiarian Supplies.

Jos. D. Enas, Napa, Cal., 6 pages—Queens and Bee-Keepers' Supplies.

Flanagan & Illinski, Belleville, Ills., 16 pages—Queens and Apiarian Implements.

Miller Brothers, Nappanee, Ind., 8 pages—Bee Hives and Bee Supplies.

M. C. Von Dorn, Omaha, Neb., 4 pages—Bee-Keepers Supplies.

G. B. Jones, Brantford, Ont. (now called "Ontario Bee-Keepers' Supply Co.,)" 44 pages—Supplies.

R. L. Shoemaker, Newcomerstown, O., 12 pages—Bee Hives and Supplies.

W. C. R. Kemp, Orleans, Ind., 4 pages—Bee-Keepers' Supplies.

E. P. Fassett & Bros., Ashtabula, Ohio—Plant Catalogue, accompanied by a bunch of nice plants, put up so as to be safely sent by mail.

Edward Gillett's Perennial Plants, etc., Southwick, Mass.—16 pages.

J. C. Vaughan's Corn and Potato Manual, Chicago, Ill.—64 pages.

CORRESPONDENCE.

May Flowers.

Pale winter waves his chilly wings
  Above the white, wan world;
The spectral winds abroad he flings,
  And wrathful storms are hurled.

But pallid winter's sway must yield,
  When wake the gentler days
That smile in sunbeams o'er the field,
  And flood the world with praise.

Up, then, my heart! *thy* winter's day
  Can work the spring no wrong;
Its ice will melt when beams thy May,
  Its sorrows die in song.

DAVENPORT, IOWA. —*M. L. W.*

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For the American Bee Journal.

Do Workers Govern the Colony?

J. RUTHERFORD.

Allow me to lay before the many readers of the BEE JOURNAL a few unpolished observations on the influence of the worker bee.

1. The workers control the colony in the act of defending, cleaning, ventilating and preparing the brood nest.

2. The workers control the size of the brood-nest by stimulating the queen or mother bee to lay. This food consists of an almost colorless liquid produced profusely by the nurse bees, and is of the same nature as royal jelly in its original state, but on coming in contact with the air it thickens and congeals into a milk-like mass, hence we call it royal jelly. This most wonderful stimulus is fed very sparingly during most of the year, and is regulated accordingly to the flow of honey and the temperature outside the hive.

3. The workers control the colony by producing drone comb or preparing it for the reception of eggs. In the spring of 1882, while endeavoring to secure some early drones, I put a nice frame of drone comb into the centre of a strong colony, and in a few days it was partially filled on both sides of the comb, but after this short spell of fine spring-like weather, we had a cold snap for ten days, during which they had no fly, and quite a number of colonies showed signs of a disease commonly called bee cholera, dysentery, and now modern authority pronounce it diarrhœa. I was feeling anxious about the extended cold snap, as I had 96 colonies to prepare for the honey harvest, and a number of colonies to prepare for queen-cells; so the first warm day I examined the colony mentioned, and you can imagine my surprise when I tell you that the same comb was entirely empty. I took it out of the brood-nest and put it behind the division-board in disgust. You will at once perceive that the weather influenced the bees to such an extent that the workers did not bring the drone eggs to maturity, also the workers stopped stimulating the queen, and she, too, ceased to bring her eggs to maturity.

4. The workers control the colony by enlarging or building queen-cells, in preparation for and during the swarming season, and workers can and do remove eggs from one cell to another whenever the economy of the colony require it, and I have produced queens, drones, and workers from worker eggs. In the spring of 1882, I had 4 queenless colonies, and in order to keep them in good condition, I gave them these combs of eggs from 4 different colonies, and the workers produced drones from worker eggs in three of them; this led me to believe that the queen laid only impregnated eggs after meeting with the drone, which eggs are metamorphosed into drones and queens by the workers, as the economy of the colony demand it, and that the theory advanced by prominent bee-keepers that the sex of the eggs is determined by the size of the cell by the abdominal pressure in depositing the egg, is fully exploded, as I have seen eggs laid on foundation before the cells were complete, and I believe the most advanced theory is that the queen can and do lay eggs intended for queens, drones and workers by simply controlling the eggs as they leave the ovaries, and that the workers have nothing to do with the sex, but simply to nurse and feed them after the eggs are hatched. This, also, I think, can be proven a myth. I firmly believe that a queen never laid an egg in any cell intending it to be any other than a worker. Can it be possible that a queen possessing such jealousy, yea, such deadly hatred against a rival, that the workers have to guard the queen-cells in order to prevent her from tearing them down—can it be possible that such a queen would voluntarily deposit an egg in a royal cell, knowing that in so doing she was endangering her own life in case of battle, or leave the home of birth and adoption to form a colony of her own.

5. The workers control the colony during the swarming impulse by sending out scouts to reconnoitre, select and prepare a place for their future abode, which is generally much inferior to the hive they are about to leave; although I have seen them select, clean and occupy an empty hive not 50 yards distant from where the swarm issued.

6. The workers control the colony by superseding the queen in case of accident or old age. The workers know that the prosperity of the colony is entirely due to the faithfulness of the queen, and whenever they discover that they cannot stimulate her to lay the requisite number of eggs, the workers turn her ruthlessly out of the hive, and proceed to select, enlarge and complete a number of queen cells out of the worker eggs remaining in the hive, but occasionally we find mother and daughter living quietly together in the same hive. They also control the colony in the act of destroying the drones when the economy of the colony demand it, and the same restless activity that was displayed in rearing the brood and caring for it, is now turned to hatred, and I have not the least doubt but that the same bees that nursed and cared for the larvæ but a few weeks ago, is now most active in worrying, killing and driving them away, such is the merciless law of the worker when the good of the colony demand it. Yes, the much maligned drone, though useful but a short-lived career, is born to go down "unwept, unhonored, and unsung."

Buffalo, N. Y.

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For the American Bee Journal.

Extra Prolific Queens.

W. J. DAVIS.

I fully agree with Mr. Doolittle and Mr. Heddon that extra prolific queens are not desirable when surplus honey is the object sought in keeping bees. I would not take the time to write, nor tax the space of the BEE JOURNAL, nor the patience of your readers did I not think that a large majority of bee-keepers do not believe the statement, and I will admit there are some reasons for disbelief. The inexperienced would say, "If the laying of the queen be desirable, why, the more eggs the better." I used to think so myself, but my experience does not confirm that idea, and it has occurred several times that the queens I thought in the spring to be the very best in my apiary, were the ones I would kill first in the fall. Let us see if we can assign a reason for this.

Every young bee reared in the hive represents a certain amount of out-door labor by adult bees, and that labor must be performed from 20 to 40 days in advance of the time when said young bee can engage in out-door labor. It is not difficult to see that a colony with 40,000 cells of brood must do double the labor to simply "support the family" than a colony with but 20,000 cells of brood. Yes, that is plain, says one, but there are twice as many bees to work. That may be, but I would ask when? Not when the bees are of the greatest value, viz.: at the beginning of the honey harvest.

Again, in this locality, there are so many days after breeding has begun in earnest, that bees can secure nothing from the fields, and the internal demand and external supply are sadly out of proportion. But if smiling earth and skies, or the timely aid of the bee-keeper enables the "excessive breeder" to pull through, they swarm at the beginning of the honey harvest, while the bees of the nomal breeder go into the surplus department and work with a will. If the greatest number of colonies and a great amount of feeding is the object sought, the case is different.

I think there is not so much difference in the amount of real labor performed by different colonies as some might think. The labor of one may be directed to the production of brood, bringing in larger quantities of pollen, consuming larger quantities of honey, in the maturing of a greater number of bees to be of little value in the autumn, while another will show a large yield of surplus, and a medium sized colony of bees when fall frosts come. The moth, with me, is a thing of the past, and 10 cents per year would be a liberal estimate for all the damage they do to me, but queen bees that are too prolific are things of the present. When writers, in recommending "new races," say the "queens are wonderfully prolific," I just think, score one against them.

In extra good honey localities very prolific queens would not be so objectionable, but such localities are the exception, not the common lot of bee-keepers.

Youngsville, Pa.

For the American Bee Journal.

Reversible Frames.

W. T. STEWART.

It will be remembered that I wrote an article entitled "The Coming Hive," and gave a description of a hive with reversible frames that "eclipsed" any that had been described. I knew that if the theory of reversing frames was practical, that I had "struck oil," and would soon be rich enough to start a free "school of apiculture." This was three years ago (1881). The season of 1882 was a very poor one for honey, and when honey was coming in slowly, my frames worked like a charm, and sure enough I had a bonanza—a bad case of "reversible frame fever." The season of 1883 rolled around, and it proved to be an extra good one for honey, and, again, I was on hand ready to give the reversible frame theory one more test practically. I had a large apiary in charge, but only a few hives with reversible frames, and watching the results of those few cured the case of fever on me. I could work them like a charm, but I could not see anything gained by reversing, when they were either full of brood or honey, and there was no room for any more. Of course it proved that bee-keeping had been reduced to a science, and that combs could be turned upside down, and many things were proved to me that I "already knew," and I am none the wiser, or none better off financially.

I have only this to say, after a trial of them in one poor season, and one good season, I have decided in my mind that reversible frames will work better in the head than they will in the hive, and that they are better to "sell" than they are to use in the apiary, and that for the average bee-keeper to use them is a loss of time, and time is money. In other words, reversible frames are good in a poor season, and poor frames in a good season. I acknowledge that I am badly disappointed in the results financially, yet I believe my hive is the best for reversing the frames of any yet found, and I shall use a few of them again, but only for the sake of experimenting with them in poor seasons.

I have been trying for years to get up a hive that was better than the Standard Langstroth, but the more different styles of hives I have tried, the better the Langstroth suits me.

I want to thank Mr. W. D. Wright for his article on setting up and running circular saws. I had just commenced making my machine, and was somewhat bothered about how to make it, and his article is so plain that it is almost like looking at the machine itself—mine will be run by steam power.

While I am writing, I will report my last season's work. I commenced the season with 65 colonies, half of them very weak and short of stores. I closed the season with 186 colonies in good condition for wintering, and secured about 5,000 pounds of white clover honey, mostly in one and two-pound sections. I made all my hives, myself, by hand, and I had not one hour's help in the apiary the whole season, and my increase was mostly by natural swarming too; they would swarm in spite of all theories and preventives. I have sold nearly all my honey at 20 cents per pound. "Is bee-keeping profitable?" I say, yes.

Eminence, Ky.

For the American Bee Journal.

Northeastern Kansas Convention.

According to previous notice, a meeting was held in the Court House in Hiawatha, on Nov. 26, to organize a bee-keepers' association. The following officers were elected: J. W. Margrave, President; W. S. Cooper, Vice-President; L. C. Clark, Secretary; Mr. Henney, Treasurer. There were 18 names put on the roll. The name given the new organization is the "Northeastern Bee-Keepers' Association." Meeting adjourned until Feb. 15. L. C. CLARK, *Sec.*

Hiawatha, Kans., Feb. 7, 1884.

Read at the Michigan State Convention.

Are Separators Necessary?

W. Z. HUTCHINSON.

Why are not separators needed in the brood department? Because the frames are of such a width, and placed at such a distance apart that the bees can build their combs of a natural thickness. Had sections been made only 1½ inches in width, had foundation been in use when sections were brought into use, and had the glassing of finished sections never been devised, separators would probably have never been employed. That they are no longer necessary is proven by the fact that three-fourths of the members of the Northwestern Convention could dispense with them; and it should be remembered that Father Langstroth characterized that body as one composed of the "largest number of large, successful, practical bee-keepers" of any convention that he had ever attended.

One objection to separators is their cost; another is the space they occupy, or, to be more exact, the space they compel the bees to leave upon each side of them. When no separators are employed there is one "bee-space" between the combs; when separators are introduced there are two. A "case" that will receive twenty-four pound sections with separators will receive 28 without them; and the combs will remain of the same weight and thickness for the reason that there is only one bee-space between any two combs; and, as bees will fill with honey the same amount of space in about the same time, there is a gain of one-seventh without separators. Again, many excellent apiarists have asserted that the introduction of separators divided up the surplus department into so many small compartments that the bees, not being able to enter and work in a body, were loth to commence work, and that the amount of surplus was lessened by their use.

The first step towards abandoning separators, is reducing the width of the sections. One and one-half inches will probably secure the straightest combs; but, by complying with certain conditions, sections of greater width can be satisfactorily employed. I used, during the past season, sections whose side bars were 1 11-16 inches wide with top and bottom bars ⅜ of an inch narrower. By the way, having ⅜-inch space between top bars and between bottom bars, instead of the usual ¼ of an inch, is a valuable adjunct in securing cratable combs without separators; as it induces the bees to leave larger spaces between the combs. With me the dovetailed sections are a favorite; one reason being that the spaces between the top bars and between the bottom bars extend clear across, with no little projecting shoulders as in the one-piece sections, to gouge into adjoining combs. I have tried putting a "starter" of foundation in each section, filling the sections half full of foundation, and entirely filling them, and I am decidedly in favor of filling them full, with the exception of ⅛ space at the sides and ¼ at the bottom. When a section is not filled full of foundation, the bees gradually shorten the cells as they approach the sides, and often fasten the combs at the sides with brace combs only, when, if the section is filled full of foundation, they draw the cells out full length next the wood, and the comb is thus evenly and securely fastened all around. I prefer the Given foundation, and agree with Dr. Miller, James Heddon, E. J. Oatman, Geo. Grimm and many others that it is less liable to warp or curl in being drawn out than foundation made upon a roller mill. Very thin foundation is more liable to curl and bend in being drawn, than that that is heavier. Seven square feet to the pound is about right. The surplus receptacles should always be filled with bees, in order that both sides of the foundation may be drawn out at the same time. As combs are built perpendicularly, hives should stand level, at least in a direction at right angles with the combs. There are no better comb builders than the black or German bees. Their combs are straight, white, regular and even, and bees of this variety, or Italians having a dash of German blood, are a very great help in securing cratable combs without separators. I had, the past season, a few colonies that were a cross between the Italians and Germans, and their combs were free from "bulges," there was no indulgence in "brace combs," and each and every section was as square and true as a brick.

In recapitulation allow me to say that, to dispense with separators use narrower sections, fill them with Given foundation, keep the hives level, do not give the bees more room than they can occupy, and either keep German bees or those having a dash of German blood.

Rogersville, Mich.

For the American Bee Journal.

How Far Bees will Fly.

J. D. ENAS.

I notice many remarks as to how far bees will fly, and also on as to the clipping the wings of the queen, and its effects upon the wing-power of her progeny.

I live in the foot-hills where timber is not plenty, and bee trees, consequently, very scarce. Early in the spring, before the sage gets regularly in bloom, bees have to fly a good part of the time between the showers, especially until April.

I have practiced clipping wings for the last 7 years, and see no reason why I should cease to do so.

A few years ago, one of my neighbors (about 8 miles away, or about 7 in a bee line), when no one had Italians but myself, in this vicinity, called on me, and said that he got awfully fooled on my bees. He lives in the Thermal belt, and had early bloom in profusion. Noticing bees at work on bloom, near his house, he saw that they were pure, bright-banded Italians, and looked very much like what he saw at my place. Knowing that I lived (as he thought) too far away for my bees to visit him, he tried to line them, thinking to find the bee tree or their home in the rocks, and to secure a swarm of pure Italians. My elevation is 700 feet, and his about 2,000, above the sea level. From his place to the nearest valley, in my direction, is 3 miles. He lined them 3 miles to the foot of his range of hills, when they rose in the air and made a direct line for my direction. I do not know of any one in the county who had pure Italians except myself, and I had lost no swarms at that time. That was several years after I had commenced to clip the queen's wing.

The same spring was very wet, with sudden showers; bees would get caught in the showers; but, it being very warm, would soon dry and finish their flight.

I do not imagine a slight clipping of the tip of one wing, so as to make them fly uneven, affects their muscular development of wing power. I learn that there is not a blackberry patch within 5 or 6 miles of me, but what my bees visit, as there is some considerable difference in the time of bloom, owing to their position and surrounding influence. All wild bees found here are blacks or hybrids; none pure as mine have been found by bee hunters, and there is hardly a wild colony but what has been located.

What effect has clipping on the ant? Should it affect the progeny of the queen bee any more? The queen ant has her wing severed where it joins the body: am I right?

Napa, Cal.

For the American Bee Journal.

Getting the Statistics.

L. N. TONGUE.

As Dr. C. C. Miller calls for suggestions as to the best method to secure full reports of bee-keepers, number of colonies, amount of honey crop in each state and county, I will venture to make this suggestion. Furnish each assessor in every town with blanks to be filled out by him at the time taxes are assessed; and let him report the same to the county clerks, or to such person appointed to receive such reports. I know of no better way whereby as full and complete reports can be obtained. There are a large number of bee-keepers who know nothing of the wish of those who are anxious for reports, from the fact they take no bee periodicals, and hence, they are not interested in making reports.

I know of some 35 bee-keepers within a radius of some 20 miles of my apiary, and I think I can safely say that not over 12 of the number take bee periodicals. Some of them have as high as 70 colonies; one has 25 colonies, and so on down to 5 colonies. I have talked with several of them, urging the benefit they would derive by taking some periodical devoted exclusively to apiculture, but I am met with this reply: "I do not want to subscribe now; I read an article in a paper that tells all about managing bees." Such twaddle makes me feel like letting such people enjoy their ignorance: the truth is, they are afraid to pay a dollar for something they cannot eat. If the above suggestion will help mature a plan to bring out the full report so much desired by the honey-producers, I shall be glad. I have 30 colonies in the cellar, apparently doing well; and 10 others owned by Mr. Jameson. We have 40 in all, from 10, spring count.

Hillsborough, Wis.

For the American Bee Journal.

The Hives I Like and Use.

HOWARD W. ACKERMAN.

I can easily say what hive I like the best, although my saying so does not add to the value of it in the least. It is the one known as the Simplicity, first made by A. I. Root. It is simply a Langstroth hive without portico or permanent bottom-board, and takes 10 standard Langstroth frames. It is 20¼ inches long, and 16 inches wide outside, with body mitered together at the corners. The top is beveled, as is also the bottom of the cover, fitting over, telescope fashion, and making a perfect joint. To make a two-story hive another body is used. The bottom of every body being beveled so as to fit the top of any other hive or body perfectly. You can thus have a one, two or three story hive by simply placing one body on top of another, tiering up as high as you wish. The cover and bottom board are the same, being interchangable. But even this hive I regard as far from being perfect, as we shall see.

Mr. Heddon, in an able article in a late number of the BEE JOURNAL, describes the hive he uses, also some of his methods of manipulating, and, although I indorse much that he says, there are a few points on which I beg to differ.

In summing up the necessary principles in the construction of a hive, he says:

1. "All hives should be easily and readily movable." I most assuredly indorse that.

2. "The stories should move off and on each other without the necessity of the least upward or downwarn motion; that is, no telescoping principle." Why not, I ask? The telescoping principle more effectually protects the hive and bees from the inclemency of the weather than any other device, and if the hives are "easily and readily movable" (as they certainly should be), the "upward and downward motion" necessary to move the supers on and off the hive should not be very fatiguing, especially if they have a capacity of only 25 pounds of honey, as Mr. Heddon recommends.

3. "There should be no dead-air space or double covering over the surplus room." I differ here, and unless I misunderstand the latter part of the article (in which he quotes from the specifications of the Langstroth patent), Mr. Langstroth did also.

4. "The sections should never rest on each other or the brood frames." I most heartily indorse that. That is an objection I have to the Simplicity hive as now made. The full height of the upper story is all right if extracting only is to be done, but where we run for comb honey in 4¼x4¼ sections, I should much prefer a story of one-half the height to take 7 wide frames of 4¼x17 inches, inside measurement, to hold 4 sections instead of 8; the number used in the present arrangement. A super of this style would hold 28 one-pound sections, and with a tin separator permanently fastened to each wide frame would be a very desirable arrangement indeed. Another super of the same size could be added whenever needed, tiering up three and four high in the same manner that Mr. Heddon does with his cases. The brood-chamber cover covering them all.

Two of these shallow supers could be readily tacked together, and by substituting 10 regular Langstroth brood frames, for the 14 wide frames, we would have a single upper story for extracting. A super could also be made of a suitable height to take 7 wide frames, each holding 3 prize boxes, or 21 two-pound sections in all. These could, of course, be tiered up in the same manner as the smaller ones, or a super of each could be placed on the hive, and thus secure our honey in both of the popular sections, and satisfy the most exacting customer.

Quite a number advocate only 8 frames in the brood chamber. I much prefer the regular 10-frame hive for this reason: With a division-board we can contract the brood-chamber to hold 8 frames, or as many less as we may desire; and, if we wish, we can put in one or two wide frames filled with sections for side storing. With only an 8-frame brood-chamber, this is not possible. Extra space for two more frames adds but very little more weight to the hive, and I consider any hive having a brood-chamber of less than 10-frame capacity (provided the frames contain no more than 150 square inches of surface) to be "just that much off."

N. Indianapolis, Ind.

For the American Bee Journal

Topics of the Day.

J. A. BUCHANAN.

There seems to be an inclination on the part of the bee-keeping fraternity, to take up certain questions pertaining to the art, and for a time, all conversation and correspondence hinge on these points, until they either become exhausted, or have been so thoroughly discussed as to have brought out all that is known or has been developed on the subject. This is well. since the experience and knowledge of each one made known to all, tends to a more generally information. Of the leading topics of present interest, I have two or three to be treated on in this article.

WINTERING.

This old question is not long at a time "laid on the table." One terrible cold winter is all it takes to freshen up the subject. Some bee-keepers think they have solved the problem, but by-and-by a severe winter, accompanied by an unfavorable spring, catches them, and cleans out their bees as well as their conceit. Where the conditions are favorable, and the bee-keeper understands his business, cellar or in-door wintering may be best; but for the masses, I am pretty sure the better way is to leave them on their summer stands, and if the conditions I shall, in this article set forth be complied with strictly, I feel safe in saying your chances for safely wintering your bees will be as good as any, if not a little better.

I would give the double-walled hive the preference; not so much on account of its better wintering qualities. but for the more uniform temperature it secures in the cool spring months when bees are weak in numbers, and desire to rapidly extend their brood. Herein lies the principal advantage of the double-walled hive. Since comparatively the single-walled hive is the one generally used, I will give a few simple directions for its preparation, which apply equally well to the arrangement of the chaff hive.

I deem it all folly to removing part of the frames of comb, and use division boards. The frames of comb protect just as well as anything that may be used. When you have a good colony of healthy bees, with plenty of honey stored around the bees in the natural way, you have not much needed preparation to make. I would advise the use of some device placed across the frames that the bees may gain free access to all their stores, and that there be used to cover the frames a clean cloth of good thickness on which should be placed a cushion filled with chaff or dry leaves, and that the whole hive be effectually protected from wet by a perfect cover.

There is one more important point. and that is the means of ventilation, which, according to my experience, is best secured by the use of a large entrance. This should be, if mice are not troublesome, from ½ to ¾ of an inch deep, and about the full width of the hive, and kept open. If any have the entrances to their hives narrowed down, I say go right now and open them up, no matter how cold the weather. The winter of 1880 was the most trying on bees of any we ever experienced here, and the only one that wintered all his bees was an old farmer who had 6 colonies, and they were raised from the bottom-board by one-inch blocks placed under each corner of his hives. One colony, that winter, went through in splendid condition, and swarmed very early, which had an entrance over two inches deep, and the full width of the hive.

A great many advise stimulating the bees to breed late in the fall, that the bees may be young to winter well. I regard this as all nonsense, and a useless expenditure of time as well as the vital forces of the queen. I have had ample experience in this matter.

EXTRACTED HONEY.

A few words on the question of selling extracted honey, and I will close. There is no use to try to conceal the fact that liquid honey is now and always will be a drug on the market. It may be boosted up for a time in some markets and sold for a while at fair prices, by being placed on the markets in small packages, nicely labeled, but its everlasting tendency to granulate in cool weather, just when it ought to be looking its best and selling well, will always entitle it to a back seat and a bad reputation. Its fate is sealed. It is not much better sale now than when first introduced. See the men who used to take all their honey in this way that have turned their attention and skill to the production of comb honey in its most attractive form.

Visit the retail stores where honey is handled, ask the proprietor about that honey sitting around in jars, looking for all the world just like bottles of prepared horse radish, and see if he does not say every time, "Slow sale." "That's a fraud." "The stuff has all gone back to sugar." "Guess we won't want any more." Again, see quotations of honey in liquid form in almost all the markets, "extracted dull, as usual, etc."

All things considered, I think it will hereafter be more profitable for the bee-keeper to turn the most of his attention to the production of comb honey—getting it up in the most attractive and convenient manner, and placing it on the market in the best possible shape. If it will not pay to do this well and truly, it will not pay to engage in this, or, indeed, in any other branch of business. So much honey has been put on the market in that careless, indifferent, don't-care-how-it-looks way, causing loss to both producer ad dealer, I have thought I would write an article on this very subject at another time.

Holliday's Cove, W. Va.

To Bee-Keepers of Illinois and Iowa.

The regular annual meeting of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Moore's Hall, No. 110 East Third street, on Thursday, Friday and Saturday, Feb. 21, 22 and 23, 1884.

Mr. T. G. Newman, of Chicago, editor of the Weekly BEE JOURNAL, will be with us, and has been engaged to give two lectures on "Bee-Keeping" on the 22d and 23d.

It is hoped that the members of the Association, and others will bring or send honey, apiarian supplies, etc. Any shipment of these, sent to Mr. Israel Hall, Treasurer of the Bee-Keepers' Association, Davenport, will be taken from the express office, removed to the Hall and cared for.

Also be ready to report results of last season's work.

Invitation is hereby extended, not only to the members, but also to their friends.

We want you to just swarm.

J. V. MCCAGG, *Pres.*
I. J. NAGLE, *Sec.*

For the American Bee Journal.

The Successful Wintering of Bees.

GEORGE A. TAYLOR.

There has been a great deal said in regard to wintering bees successfully, but still a great many are not very successful. In this latitude I consider a cellar very necessary. In my judgment the thing most needed for success in wintering bees is a warm, even temperature. Some consider a wet cellar preferable to a dry one. I would not take an extreme either way, but would prefer a moderately-dry cellar (not dusty), the temperature not going below 45° or 50°. I believe, when bees are wintered in this way, we need have very little fear of dysentery. I quite agree with Mr. Ira Barber in regard to bees not eating enough pollen to give them dysentery, if they are kept in a warm temperature. Our cellar is neither wet nor very dry. Our bees usually store a large quantity of pollen, yet we have wintered bees 13 winters, in this cellar, without loss from dysentery. The temperature, so far this winter, has stood from 46° to 52°, and the bees, at present, are as small and bright as when put into the cellar.

We have no more trouble in wintering our bees than we do in wintering other stock. I firmly believe that just as long as bee-keepers continue to winter their bees out-of-doors, or in a cool temperature, just so long we shall hear of large losses in wintering bees.

Canton, N. Y., Feb. 11, 1884.

For the American Bee Journal.

Is Extra Prolificness a Desirable Quality in Queens.

O. O. POPPLETON.

On page 30, current volume of the Bee Journal, Mr. Frank Benton suggests the above question, which it may be well to have discussed, as it lies at the foundation of successful honey production.

A very large majority of bee-keepers makes honey raising a speciality, and those of us who do that care little for the large numbers of bees a queen may raise, unless those bees store a proportionate amount of surplus honey. If the statement is true in the sense used by Mr. Benton, that "If we have the workers in a hive when the harvest opens, we are sure of honey," then all colonies would have to have equal powers and equal disposition to store honey in proportion to their numbers, which, I think, all observing bee-keepers will agree with me in saying is not the case. How very common it is to notice two colonies in the same apiary, in the same kind of hive, with about equal numbers of bees and brood, and so far as the bee-keeper can see in equal condition every way, and yet while the one gives a large amount of surplus honey, the other gives little or none. This is one of the most common experiences in bee-keeping, and shows conclusively that while a good queen is one of the essentials in successful honey production, it is far from being the only one.

In my locality, nearly all our surplus honey is stored during a couple of short flows of honey each year, each flow lasting from 5 to 15 days, the balance of the season varying from getting just enough honey to keep the bees breeding nicely, to a medium flow, but at least four-fifths, if not more of our surplus honey is usually obtained during those short flows of honey. It can be seen that we get much better yields of honey from those colonies, that during heavy flows make honey gathering their first object, and brood-rearing a secondary one. The interval between these flows gives ample chance for them to raise all the bees needed in time for the next flow when it comes, these flows usually being from 4 to 6 weeks apart. The kind of bees I find the most profitable, are those that raise plenty of bees during the spring, and whenever there are only medium flows of honey, but whenever they have an opportunity to do so, will bend all their energies to gathering honey, and not do as Mr. Doolittle says: "Seem to think that a large flow of honey should mean lots of brood, so at brood rearing they go."

My colonies that contain extra prolific queens are very rarely indeed among my best honey gatherers, and what Mr. Doolittle calls the "Secret of honey-producing," I would change so as to read: "Lies in getting" *the right kind of* "bees just in the right time for the honey harvest."

Williamstown, Iowa.

For the American Bee Journal.

The "German" Bees.

G. W. DEMAREE.

A large majority of writers on apicultural subjects, when speaking of the German race of bees, use the word "black" interchangably with "German." If we should conclude that these writers speak accurately, we would be forced to believe that the so-called German is necessarily a black bee.

While I admit the propriety of the name "German," as generally applied to this race of bees, the fact, as it appears to me, that the Eastern bees, in their make-up, carry more or less of the blood of the German, is conclusive to my mind that the German race has had a wide range in the world in the past. But I cannot admit that they are properly called "black bees." The writer can remember when there were large tracts of land covered with timber in nearly every community in central Kentucky; and in those days it was not a difficult thing to find "wild bees" in the timber. In fact, they are to be found in a wild State in many localities yet. Of the German race of bees, I have noticed in this and other States at least three types of bees, whose distinctive features are sufficiently stamped to attract the attention of any close observer.

The most common of these in Central Kentucky, years ago, was the beautiful slender gray bee. This variety may be described as rather slender in general appearance, with pointed abdomen. Their true color is a mixture of brown and gray. But the fact that the gray consists of a liberal sprinkling of light gray fuzz or downy hairs over the whole of the body, accounts for their general gray appearance. The workers have rings of white fuzz or hairs around the postern section of the body similar to the Albino variety of the Italian; and herein, perhaps, is a key to the origin of the so-called Albino. The queens of this variety are rather slender, and quite pretty for dark queens. The drones are nearly black on the upper parts of the body, but have a sprinkling of light-colored hairs on the under part of the thorax, and some other parts of the body. I have seen these bees at several places in my travels.

In 1855, while traveling in the West, I saw this variety of the German race about 15 miles above St. Joseph, on the Kansas side of the Missouri river. Some Indians "camped" in that vicinity, and while there cut several bee trees which they found in a strip of timber some three miles from the river as you follow what was then the old California road. I examined these wild bees, and found them to be identically the same as I have described.

Another variety which was quite common, if I remember correctly, and are yet to be found in the rural districts, would most likely be called "brown" as to their general color, by most people. Although they have rings around the abdomen much like the gray variety, but not so conspicuous. In form they are thicker and more bulky in appearance than the gray variety.

Whether or not there is any material difference in the working qualities of these two varieties, if they are in fact varieties, I have not tested the matter sufficiently to hazard an opinion. I have always fancied the slender gray bees because of their clean, spritely appearance.

The other variety, making up the three, comes the nearest of meriting the appelation "black" of any bees I have seen—still they are not true black bees. I would describe them as dark, pinched, hungry-looking little fellows. Of course they look much improved when engaged in gathering honey, at which time they show slightly the rings of fuzz around the abdomen. They are the most ungovernable of any bees I ever tried to handle. Not that they defend themselves more vigorously than some other varieties, but rather because they refuse to do anything like civilized bees. I am a little puzzled to know where these little dusky imps come from, or how they came about. I have no memory of seeing them prior to the importation of the Italian.

I have thought it possible that they might be the "tag end" of run out hybrids. After noticing, for years, the proneness of all promiscuous crosses to run down to the lowest point of animal existence, I would expect just such a result. By the way, while speaking of black bees, I call to mind the fact that several years ago, while discussing the subject of breeding bees, see Vols. XVII and XVIII of the Bee Journal, I suggested that the outcropping specimens of true black bees and queens, which sometimes make their appearance when breeding from the imported Italian, is a thoroughbred of nature; and that most probably there was to be found somewhere on the earth a pure black and a pure yellow race of bees.

Well, now Mr. A. W. Osburn, in his letter from Cuba, page 642, Vol. XIX of the Bee Journal, tells us that "The native bee of Cuba, is a simon-pure black; there is no German or half-breed about them." Reasoning from analogy, I have no doubts but the pure yellow race of bees will be discovered before a great while, if not wholly absorbed by contact with other races of bees. If the pure yellow race is once discovered, what a field will be opened to the scientific breeder. They would furnish him the starting point connected with other races for any number of crosses or thoroughbreds. Judging from the out-cropping specimens which I have seen while breeding from selected Italian and Cyprian stock, I would expect the workers of the original yellow race to be in color approaching a clear yellow when young, fading to leather color when old. They should have large transparent wings, and a liberal covering of white fuzz on the upper part of the thorax. The queens should be of the same color as the workers, except that their wings should be slightly tinted with purple, perhaps.

Christiansburg, Ky.

For the American Bee Journal.

Cultivate the Home Market.

EUGENE SECOR.

I believe it is safe to say that not one town in ten is supplied with honey the year around. Small bee-keepers, who produce only a little more than enough for family use, are too apt to get excited if they happen to have 500 or 1,000 pounds of honey for sale. They, perhaps, try to sell it all at one time, or to one man, in their own vicinity, and failing in this, ship it to the large cities, flooding the already over-stocked markets, and their home market is either without honey the greater part of the year, or it is brought in from the wholesale centres. The consumption of honey ought to and will increase from year to year, if it is properly kept before the public in its pure state by reputable producers.

There is no better way to establish confidence in the product than to put upon the market only pure and fully ripened honey, with the guaranty of the producer, who is known to be honest and trustworthy. Not a pound of extracted honey should be offered for sale, that is not thoroughly ripened. A label should be put on every package showing what it is, and who produced it. The suspicion of adulterated or manufactured honey is often created by attempting to sell sweetened water instead of the rich, heavy well-ripened article that delights the customer, as well as the seller. If the bee-keeper is ashamed to put his name and address upon it, he ought for his own future good, if not for the good name of the fraternity, to keep it out of the market. Every pound of good honey that is sold at a reasonale price, will help to sell another pound; and no advertising will pay better than to let the consumer know where to go to get more of the same kind. If it is put up in attractive packages and kept in a conspicuous place in some live man's grocery, and sold at such a price that people can afford to use it the demand will greatly increase.

I think if we were willing to sell our honey near home for the same price paid by commission men, that we would sell a great deal more of it, besides decreasing the number of those who are so anxious to engage in the new and untried pursuit of apiculture. When honey is sold at unreasonable high figures at home, people think there is a bonanza in its production, and hence are more apt to make the venture; and if one new one succeeds, he divides the field and the profits with the pioneer.

Some of the Pamphlets, "Honey as Food and Medicine," wisely distributed, will create a market. The children will take their medicine in honey every time. The honey sold at home undoubtedly brings the greater profit.

If a man is producing honey by the ton, of course he cannot dispose of all of it in the small town he may happen to live near, but he should not neglect the markets nearest home if he wishes to occupy the territory.

Forest City, Iowa.

For the American Bee Journal.

What shall we do with Weak Colonies in the Spring?

J. E. POND.

The above question has been asked me several times of late, and I know of no better way of answering several inquiries at once (as all of them say they subscribe for the BEE JOURNAL), and thus save precious time.

We have been advised in days past to unite all weak colonies; this advice which is good for fall management, is of no value in the spring, unless it should so happen that queenless colonies are found, when, of course, union is strength. My experience teaches me that weak colonies united will live no longer than the same colonies would have done had they been kept separate; the reason being, that the bees are all old and can live but a short time after having borne the hardships of winter confinement. It is hardly possible to imagine that all colonies will be alike weak, if such should be the case, I should hardly know what to advise for the bee-keeper who finds his apiary in such a state, would hardly be able to strengthen up colonies successfully.

The object of an apiarist should be, not to obtain the greatest possible yield from a single colony, but to equalize the whole apiary so that he may obtain a large and an average gain from each colony. To this end he should in early spring equalize his colonies in strength as nearly as possible, and this can best be done by taking frames of brood from those that are strong enough to bear the loss, and give them to the weaker colonies. If he has, as he should have, average queens in all his hives, he will be able by careful management and judicious feeding to stimulate, to bring all his colonies up to prime condition, and have a large force of foragers ready to take advantage of the first flow of honey that is secreted by early flowers. Many, however, are not careful enough in this matter of stimulative feeding. We begin without reference to the strength of the colony to feed diluted syrups, and also spread the brood, the consequence being that a cold frosty night drives the bees into a cluster, the brood is exposed, chilled, and dies, and the colony is either ruined completely or so injured that it becomes valueless for the whole season.

In giving frames of brood to weak colonies, it is not advisable to give them to the weakest first, as the same condition of things may happen, as is liable to follow stimulative feeding. In this whole matter of strengthening and equalizing colonies, there is an opportunity for exercise of the greatest care and judgment, and to know how to do it just right every time, can only be learned by experience. Many are apt to make the mistake of strengthening colonies too early. By so doing they lose a large amount of stores in feeding useless consumers. We want a large force of foragers when there is honey to be gathered, and at no other time, and if we could as easily arrange the matter through the whole season, as we can in the spring, our apiaries would be far more productive.

Each bee-keeper should know the honey flora of his locality, and knowing that he will know just when he will need a force of foragers to gather the nectar secreted by them. It is impossible to give particular rules to govern this matter; the rule that would well apply to one section would prove a failure in another, so every apiarist must be a law unto himself, and work in accordance with his locality and surroundings; if a beginner he must learn by experience, and not become discouraged if failure follows his first efforts; if an expert, he will know what to do, and will do it, knowing full well that if the season proves favorable, he will obtain good results.

If any queenless colonies are found, when it is too early to raise queens with any prospect of their mating in time to be of any use, they must be united with some colony that has a good queen; this, I have found can best be done by moving the hives close together, giving both colonies a little smoke, and when the bees are filled with honey, removing the frames, bees and all from the queenless hive, and alternating them with the frames in the other hive. This united colony should be closely watched, and if any fighting takes place, another blast of smoke should be given them. If the union is made in this manner on a chilly day, no trouble need be anticipated, and no pains need be taken in regard to the queen. I have united many colonies in this manner without caging the queen, and find she is not troubled at all, and that the bees unite peaceably, and are friendly at once. The reason of this, I conclude, is that the mixing up caused by alternation of frames, puts them in a condition such that they do not know what is up, and so stand on their good behavior, perhaps, for fear of consequences. Whatever may be their feelings the fact remains that they so unite peaceably, and that to the practical man is enough for present purposes, however much he may wish to know the whys and the wherefores.

Foxboro, Mass., Feb. 6, 1884.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*

Independence, Mo.

Local Convention Directory.

1884. *Time and place of Meeting.*

Feb. 21-33.—E. Iowa, & W. Illinois, at Davenport, Ia.
J. V. McCagg, Pres.

Mar. 4.—Meeting at Janesville, Wis.
Mack & Fatzinger, Com.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

March 20.—Southern Indiana, at Madison, Ind.
H. C. White, Sec.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Do Bees Thin Out Foundation?

Has foundation been thoroughly tested when made 3 square feet to the pound, with the base as thick as the side walls? If it has been tested, who has found the base when drawn out by the bees any thicker than natural comb? I have not; but have found the side walls of the same, at the base, seemingly untouched, which would make comb honey unsalable. Can it be possible that we have been "asleep" on this point, and are thinning the base and heaping up wax on the side walls, as we might suppose to be helping the bees and are helping them in the wrong place. I shall experiment further the coming season by placing small drops of wax in each cell of thin foundation. I never saw honey that could not be detected, even 10 square feet to the pound, Given not not excepted. A Bee-Keeper.

Bees act very differently at different times with the same comb foundation. My experience has been this: Bees will sometimes, but rarely, make a thick base thin. They will sometimes, but rarely, fail to draw out thin, the side walls of the Given foundation, because they are soft, not having been pressed hard in the process of making. I have never half pressed Given foundation to leave the base thick, to see what they would do in such a case. The base of that foundation is very thin, and pretty hard pressed, I think. I have never been able to detect that the thick bases of other foundations that I have experimented with, were ever thinned in process of working into combs by bees. Such instances have been reported, and, no doubt, truthfully so, but I think from the scarcity of such reports, and my own experience, that they are quite rare.

We have had hundreds of combs built on full size pieces of Given foundation, that run about 8 square feet per pound, that none could detect any signs of foundation about. We have also had combs that showed the foundation plainly, when the same foundation as above referred to, was used. In no case have I ever had one word of fault found with any of my comb honey sold. It is *all* "salable."

Separators.

Will Mr. Heddon give, through the "What and How," his objections to separators?

1. Would not the bees wax the frames together so that you never could get them out of the hives?

2. What is the best thing for a bee sting, to keep the flesh from swelling?

3. About what is the average age of the honey bee?

4. What plants can I raise that will produce honey in dry and hot weather, and late in the summer?

Mt. Hope, Kans. S. F. Daily.

1. My objections to separators are, that their cost and extra trouble in manipulating, are not balanced by any usefulness they possess. If you work properly without them, the bees would not glue the frames to each other without separators, any more than they do to each other and to the separators where they are used. Still, if I used anything so awkward as broad frames, I would use tin separators with them (see page 315, Bee Journal for 1883).

2. As my flesh does not swell under bee stings, I hardly know what to say. I believe it is generally conceded in the medical world, that amonia is the best known antidote for animal poisons. There are a host of bee-keepers who are willing and ready to tell us what they used when they got stung, and got along with it first-rate; they are alive and enjoy fair health to-day. An antidote for the declining price in honey, is what we most need at present.

3. In the working season, 8 or 10 weeks; out of that season, 5 to 7 months. Italian bees are longer-lived than Germans; at least such has proved to be true with two experiments I have made of changing queens between Italian and German colonies.

4. Try melilot clover (mow it in June if you wish it to blossom in September and October), and others, of more doubtful practical value.

Moving Bees by Railroad.

I expect to move 100 colonies of my bees (about one-half of them) to Michigan by railroad, in the spring. I want to know how to prepare them for this long journey. R. B. Oldt.

New Berlin, Pa.

The period you give is rather indefinite. Supposing it to be late in the spring and warm, I would advise the following: By the aid of your freight agent, select a springy, easy-riding, well-ventilated freight car. As the colonies will be quite strong and contain considerable brood, the frames should be securely fastened, and over each hive should be an empty case, from 2 to 6 inches high, securely fastened to the hive, with nothing between the brood frames and case, and the tops of said case should be covered with wire cloth.

If the hives are Langstroth's, with all-wood top-bars and wood rabbets, a "three-fine" nail in the end of each top-bar will hold the frames securely.

If the rabbet or ends of the frames are metal, or the hive is a deep one, I would advise tacking strips on to the ends of the hive, and between the frames. Place the hives in the car so the combs run lengthwise. Place only one tier in the car, unless so arranged that the upper tier rest clear above the lower one.

Go with the bees, and, with a whisk broom and basin of water, sprinkle through the screen occasionally. If the watering is neglected, the bees will be apt to eat up all the larvæ. For hundreds of minor details, you must depend upon your native tact.

Convention Notices.

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

Wm. R. Howard, *Sec.*

Kingston, Tex., Jan. 16, 1884.

☞ We intend to organize a bee-keepers' association for Southern Indiana on March 20, 1884, to meet at the Merchants and Manufacturers' Club Rooms, Madison, Ind., at 9:30 a. m. Kentucky bee-keepers are invited to participate. H. C. White.

SELECTIONS FROM OUR LETTER BOX

Good Increase.

My report for 1883 is not as good as it was the year before. I commenced the spring with 20 colonies; increased to 50, by natural swarming; sold 6, and 3 took Greeley's advice and went West. I now have 44 in the cellar, all right so far. I only obtained 1,458 lbs. of comb honey and 120 lbs. of extracted. LEVI FATZINGER.

Janesville, Wis., Feb. 13, 1883.

Bees Wintering Well.

On Sunday the weather was warm and fine; every colony of mine was up and dressed. They cleaned out the hives nicely, but respect for the day prevented me from examining into their condition. I think they have eaten up but little honey, judging from the small amount of bee bread, cappings and other *debris*, owing, I suppose, to continued cold weather. I found but few dead bees—11 colonies showing about a pint only. Every colony last fall covered 7 frames full, and I packed them in various ways for experiment, and shall give the result thereof by-and-by, when I ascertain the exact condition in March. I hope to prove something in wintering, as I believe I have fully solved the problem, barring accident.

J. E. POND, JR.

Foxboro, Mass., Feb. 7, 1884.

Toronto Convention Report.

MR. EDITOR:—In regard to the Toronto Convention report, in the BEE JOURNAL for Jan. 23, 1884, you advise any one that has any thing to say, to speak right out. I think this is the proper thing to do, and I will, therefore, ask Dr. Miller to "arise" and explain as to the progress of publication of the pamphlet that was to be sent to each member of the North American Bee-Keepers' Association. Dr. Miller was elected secretary, and was acting as such when a motion was offered by Dr. Brown, of Georgia, I think, and supported by Judge Andrews, of Texas, to have the minutes published in pamphlet form and distributed to the members. At this juncture I made a motion that each member's name with his post-office address be inserted in the same, and also that a suitable badge, similar to those worn by the members of the Northeastern Society, be secured and sent with said pamphlet. This motion was supported by some member, and was unanimously carried, and after this, there were three or four gentlemen sitting near me who said that they would now become members as they wanted to secure one of those beautiful badges; they immediately arose and subscribed their names and paid their fees, and the same took place from all parts of the hall, as it seemed to be a great inducement in getting members. Now, Mr. Editor, in justice to those, as well as all concerned, I am anxious to hear all about this through the BEE JOURNAL, as I think many will be anxious to have a full explanation. If that pamphlet is not yet published, I would recommend that the names of the vice-presidents be inserted, so that we may know who and where they are. H. BESSE,

Vice-President for Ohio.

[Do not be too severe, Doctor; we were not there, as you know; but it has been said that "business" was out of its element there, in such an enthusiastic gathering, and, perhaps, that explains it. Evidently there are neither reports, names and addresses, nor badges forthcoming.—ED.]

Moth or Miller.

In reply to Mr. W. F. Clarke, let me say that while miller is a proper term, it is not so elegant as moth. The latter is sanctioned by the best usage. Entomologists almost never use the word miller. The term moth-miller is a barbarism. As well say a female woman. Let me add, that if John Phin shows the same wide culture and wise discretion in all his book as in a few pages sent to me, he will give us a masterpiece. We may well rejoice that a person of such wide information, and such admirable judgment, has undertaken this important work. A. J. COOK.

Lansing, Mich., Feb. 8, 1884.

Bees Prospering.

I put 50 colonies of bees in the cellar in December, in good condition, and they all appear to be right yet; they are still, dry and clean. I see reports in some papers that the extreme weather is killing a great many bees, but it is not so in Wisconsin; where they are properly housed they are all right. L. M. ROBERTS.

Ft. Atkinson, Wis., Feb. 9, 1884.

[Some of the daily papers have published such as "news," but they obtained it, no doubt, of those who took no care of bees.—ED.]

My Success as a Beginner.

It is only one year ago that my attention was first called to this industry through an article entitled, "Healthful and Profitable Employment for Women." At that time I was slowly recovering from a protracted season of prostration, and open air exercise had been recommended. I caught at the word "healthful," while "profitable" pleased the ear. I began to look into the subject, subscribed for the BEE JOURNAL, procured Prof. Cook's Manual and A B C of Bee-Culture. In April I called upon the Rev. O. Clute, of Iowa City, from whom I received valuable suggestions, and invested in 3 colonies of Italian bees. These were pronounced "beauties," and the only pure Italians I know of. My experience was similar to others I have read. Some lasting impressions were made upon my memory, but I fully enjoyed my work, and consider that I was fairly successful, taking all things into consideration. I have now 8 colonies besides 1 that sought the woods, from the original three, and from 150 to 200 lbs. of honey above the full winter's supply. It was a poor season for surplus honey, and considering all things, I feel quite satisfied with my first experience in bee-keeping. My bees are wintering on summer stands, well protected with chaff cushions, etc., and seem to be all right.

MRS. R. K. EASTMAN.

Webster City, Iowa, Feb. 11, 1884.

Making Comb Foundation.

Would it be profitable to manufacture your own foundation for an apiary of 25 to 50 colonies? Does it require much practice or mechanical skill to manufacture a good article? It is very expensive to purchase from a distance, as the freight or express charges are quite an item. Please answer through the BEE JOURNAL and oblige an interested bee-keeper.

MRS. J. W. KNADLER.

Valley Station, Ky., Feb. 11, 1884.

[It requires considerable practice to make a good article, and we fear it would cost much more than the article already made and the cost of transportation for so few colonies, unless you wanted to use it in wired frames; then the bulk would make it costly for expressage.—ED.]

Bee Pasturage—A Correction.

Mr. M. L. Trester, Secretary of the Nebraska State Bee-Keepers' Association, made a slight mistake in his report, where I asked the question: "Will it pay to keep 80 acres of land, on which there are 1,600 basswood trees, 9 and 10 inches in diameter, exclusively for a bee pasture?" It should have read 2,500 trees, 1,600 of them from 9 to 10 inches in diameter. Taking the whole lot, they run from 3 inches to 24 inches in diameter, and 1,500 more average about the same within a radius of 1½ miles.

Watson, Mo. R. B. MUIR.

Packed in Chaff.

In 1882-83, bees wintered nicely. I had a few Cyprian swarms before the snow storm of May 22. My bees did well, considering the season. I had 28 colonies, spring count, and increased to 89; sold 37 colonies for $310.50, and got 1,500 lbs. of comb honey, which I sold at an average of 15 cents per pound, making $225. I now have 52 colonies, packed in clover chaff, all alive; a few are a little scant of stores, but I intend to feed them as soon as it gets warm enough. I feed corn meal, rye and buckwheat flour in the spring before they can get natural pollen. I have Cyprians, Italians and Albinos, and I think the Cyprians far ahead of the others, both for honey and increase. They are a little nervous, but if well managed are as easy to handle as any bees. H. HANCE.

Bryan, O., Feb. 6, 1884.

Was Not Stung Once, Last Season.

I stated in the spring with 14 colonies; increased to 43, and received 1,200 lbs. of comb honey in one and two-pound sections. I did not get stung once, last season. I do not claim to be an expert (I guess I am so awkward that my bees pity me). I have them all packed on the summer stands. Up to this time, all are in good condition. I told a friend the other day that if I only kept one bee, and that a drone, I would have the BEE JOURNAL so that I could keep it intelligently. He said he could not see the point. I told him to try bee-keeping without it, and he would see more points than he wanted to.

F. J. SAWIN.

Kirkwood, Ill., Feb. 9, 1884.

Well Done.

My report for 1883 is as follows: I commenced the season with 70 colonies, increased to 93, and obtained from them 8,000 lbs. of honey; 3,000 lbs. being comb honey, and 5,000 extracted.

JAMES CORBIT.

Palmyra, Mo., Feb. 9, 1884.

Testing Thermometers.

There are only two points at which thermometers can be tested by natural standards—the freezing and the boiling points of water. A mixture of snow or pounded ice and salt may be had at different temperatures depending upon the temperatures of the air, of the ice and of the salt. Pure water freezes at 32° and boils at 212°. In the case of boiling water, we must note the barometer also, because water boils at different temperatures depending upon the pressure of the atmosphere. I have tested many thermometers for scientific purposes, and these are the general principles involved. To give long details would probably occupy too much space. If Mr. Yoder's thermometer shows 32° in a bowl of pure ice in a melting state, but not melted, it is no doubt correct enough for all ordinary work. Thermometers change as much as two or three degrees after being made, unless the tubes are filled and kept sometime before being graduated.

Cedar Brae, N. J. JOHN PHIN.

Bees Banked up with Snow.

I put into winter quarters, in the fall of 1882, 31 fair colonies, in pretty good condition, so far as stores were concerned. When the first big snow storm came, I took a shovel and banked up some 15 hives with snow and dirt, half way to the top on three sides, leaving the entrance side naked; the other 16 were left without any protection except some cushions on the top. In March, on one nice, warm day, I opened the hives of those that were covered up, and I found frost and ice all around on the inside, one-half of the bees dead and dying; the result was, I had to change them to other hives, and then they had the dysentery, and in three weeks I had only 20 colonies, and many of those reduced to a mere handful. Those I left without banking up, came out very much better; indeed, my losses were from those that were banked. After the cold, rainy weather had passed, and I had fed many of the weakest ones, up to June 15, the honey began to come in, and they began to swarm, and so continued to keep it up until Aug. 31, in spite of all I could do to prevent it, increasing from 20 to 58, and I got 1,500 lbs. of honey (1,200 lbs. being extracted), and here let me say that I could have had 500 lbs. more if I had not been short of supplies. I now have 46 colonies buried in a clamp, and 12 on the summer stands. I expect to leave those in the clamp until about April 1, or until pollen begins to come in. I will report in the spring just how I succeed, and will possibly have to give the "other side" of successful wintering.

J. W. MARGRAVE.

Hiawatha, Kans., Feb. 7, 1884.

[Losing 500 pounds of honey by neglecting to get supplies in proper time, is a heavy penalty. Let all take warning by this and procure everything they need early in the season, and have it on hand long before it is wanted.—ED.]

Prospects in California.

It has been raining for the past ten days; over 15 inches in all for this winter. Prospects are good for a first rate honey season, as the soil has had a thorough soaking. Bee men and farmers are in good cheer over the prospects. Old residents claim it to be the heaviest rain we have had for a number of years. Vegetation is finely advanced, and it is probable the season will commence early.

M. H. MENDELSON.

San Buenaventura, Cal., Feb. 7, 1884.

Wintering Well.

We have had a very hard winter on bees so far. The thermometer indicated 32° below zero, on Jan. 5, and 20° below several times during the month. I hear some complaining of their bees being dead, but I think, as a whole, bees are wintering very well in this county. I have 76 colonies, packed with chaff on the summer stands; they seem to be all right yet.

J. A. OSBORNE.

Rantoul, Ill., Feb. 11, 1884.

A Warm Cellar for Bees.

Bees are wintering finely in the cellar; they keep very quiet, and there are no signs of dysentery yet. My bees were taken into the cellar on Nov. 13; the honey-boards were all removed and a piece of rag carpet spread over the frames (coffee sacks are just as good); the bee cellar is very large, and has an open chimney; it is kept at 45° to 50°. If it gets lower than 45°, I always raise it to 50°; if the bees have good honey they will winter well. There is not a gallon of dead bees in the cellar at present, from 51 colonies. In the cold winter of 1880-81 my bee cellar was below the freezing point nearly all the time; and out of 35 colonies only 9 came out alive; nearly all of them being weak. That gave me enough of cold cellars; since then the cellar is kept warm. I have not lost one. I do not believe pollen is the cause of dysentery. All we want is a warm cellar. I prefer the hybrid bees and the standard Langstroth hive for comb honey.

H. T. HARTMAN.

Freeport, Ill., Feb. 10, 1884.

☞ The Northeastern Bee-Keepers' Association will hold its second annual meeting on Wednesday, March 5, at the Court House, in Lapeer. Hotel rates reduced to $1 per day.

W. Z. HUTCHINSON, *Sec.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 18, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 15@21c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & Co.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—Demand good and stocks very low. Little or no nice 2 lb. sections in this market, and a few shipments would be readily taken at 17@18c. Extracted honey—in fair demand for dark fall at 8@9c.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Market is quiet, and common qualities difficult to place at anything like satisfactory figures. Fancy qualities are scarce. White to extra white comb, 15@18c; dark to good, 9@11c; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull and slow sale. Comb 12@16c., and strained and extracted 6@8c. per lb. Top rates f fancy small packages.

BEESWAX—Steady at 32@33c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.

BEESWAX—In great demand, but no supply; nominally 30c. per lb.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50. 500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ A correspondent asks if any one may select a Binder for the Bee Journal, among the books given as Premiums for getting subscribers; we reply, yes, any book or binder we keep for sale may be selected by those who get up clubs.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ We now club the *British Bee Journal* and our Monthly for $2.50.

☞ Our friends will find this the season for securing subscriptions. We offer the premiums and they can easily secure them.

☞ Do not let your numbers of the Bee Journal for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ As the reading season has come with the long winter evenings, it is just the time to read the various books on Bee-keeping. When renewing your subscriptions will be a good time to get a supply of such literature. See our club rate on Books with the Bee Journal, on the first page of this paper.

BEES for SALE, CHEAP.

1884. **FORTY COLONIES OF GOOD** Italians in Langstroth hives For Sale **CHEAP.**

Address, **R. M. ARGO,**
8D2t 3B1t PAINT LICK, Garrard Co. KY.

South Florida Apiaries,

At Tavares, Orange Co. Florida.

We are now booking orders for EARLY SPRING DELIVERY. Orders should be accompanied with the Cash. **Queens** by mail, from $1 to $2, bred according to the most approved methods, Italians. **Nuclei Colonies,** containing each two frames, 15x6 inches—Brood, Bees and Honey, $2 each set, to which the above price of Queens is to be added:

On orders for 10....10 per cent. off.
" " " 50....20 " " "

On all Northern and Western orders, free delivery to New York City. Special attention will be given to fitting out entire Apiaries in the South. Orders may be sent to J. B. MEAD, Randolph, Vt., or to

REV. W. S. BLAISDELL,
TAVARES, FLORIDA.

1884. 1884.

J. V. CALDWELL,

Cambridge, Henry Co. Ill.,

Manufacturer of PURE HONEY-COMB FOUNDATION, and dealer in

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New Circular now ready. Send for it! I pay 35c. cash for good yellow Beeswax, at the depot here.
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BEE-KEEPER WANTED.—ADDRESS, stating terms. C. WEEKS, Clifton, Tenn.
5A4t

Be Sure to Send For my Price List of Langstroth Bee Hives, Sections, Smokers, Extractors, Comb Foundation, &c., before purchasing your Supplies for 1884. Address, **HENRY CRIPE,**
8A1t NORTH MANCHESTER, IND.

DR. FOOTE'S

HAND BOOK OF HEALTH,

Hints and Ready Recipes.

Is the title of a very valuable book that gives a great amount of information of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

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What to Eat,
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Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
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How much to Wear,
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7A1y RICHMOND, Fort Bend Co. TEXAS.

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Simplicity, Langstroth and Chaff Hives, Section Boxes, Brood Frames, and Comb Foundation. Send for Price List. The successors of A. B. Miller & Son.

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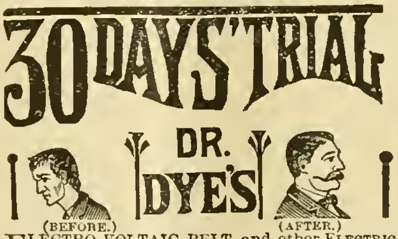
51D8t NAPPANEE, Elkhart County, IND.



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White Poplar Dovetailed **SECTIONS** A Specialty.

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At Lowest Figures!

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☞ State where you saw this. 8A2t 10Ctf

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Turns the combs without the aid of the operator; will do twice the work of any other Extractor. Send for descriptive Circular and prices. "Patent applied for." Also

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We would solicit the patronage of those who wish to buy **FIRST-CLASS QUEENS,** as we are agents for the celebrated J. T. Wilson stock.

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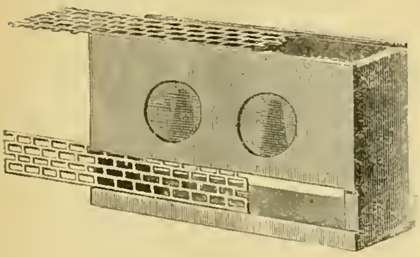

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In the flat (per doz,) including one trap made for model (by express only) 3.00
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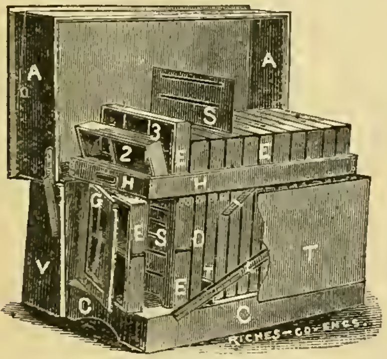

The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

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$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
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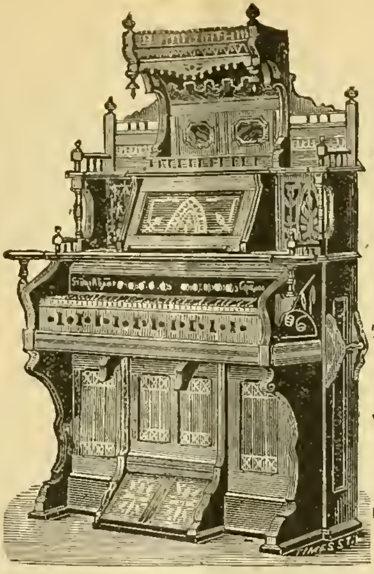

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Catalogues free to any address.

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ST. LOUIS.

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

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Dear Madame:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.

Yours, CHAS. DADANT & SON.

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Dear Madame:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.

All prefer the foundation I manufacture on one of your mills, to that made on any other machine. I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.

Yours respectfully, J. G. WHITTEN.

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After using one of your foundation mills for the past 3 years, we can't say too much in its favor. And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

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I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to

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REDUCED PRICES!

All one-pieced Boxes and 4-pieced, 4¼x4¼, per 1,000, $4.25. 5¼x6¼, per 1,000, $4.75. And Hives proportionally cheap. Send 5 cents for sample and special Price List.

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Five or 10 colonies of Italian or Hybrid Bees for Wax, Foundation, Sections, etc. 13 frames in a hive 13x11¼. AUG. J. HINTZ, Lemont, Cook c, Ill.
8A1t

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.
Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.

Dadant's Foundation Factory, wholesale
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Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

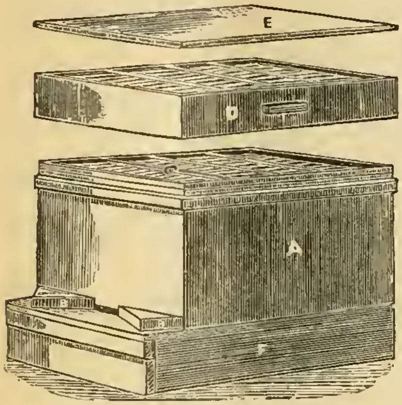
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
32ABtf J. VANDERVORT, Lacyville, Pa.

1868. 1884.

HEDDON'S
COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

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I have now made arrangements so that I can again supply you with those nice white Dovetailed Sections, 4¼x4¼x7 to the foot, and 8 to the foot, $7.00 per 1,000 from here. Will be ready to ship on and after March 15th.

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Will receive terms for 1884 on application.

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If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

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SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

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I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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On account of the prevailing scarcity of beeswax, the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

NO. 30 TINNED WIRE
For Brood Frames.

One ounce spools, each, - 4 cents.
Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents.
Postage, 13 cents extra.

One pound spools, each, 40 cents.
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One pound will wire about 175 frames.

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On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,

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BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

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It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861. Chicago, Ill., February 27, 1884. VOL. XX. No. 9.

THE WEEKLY EDITION
OF
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☞ Letters for publication must be written on a separate piece of paper from items of business.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

THE AMERICAN BEE JOURNAL

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made.

It is kept for sale by Messrs.

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150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

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FDN. MILLS. 10 INCH $ 15.00
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MAYSVILLE, KY.

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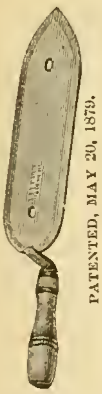
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UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.

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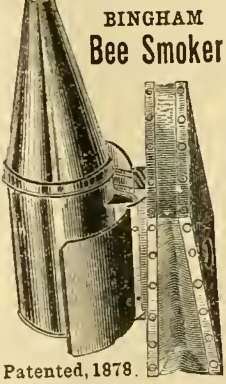
BINGHAM
Bee Smoker


Patented, 1878.

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.**, postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.— This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **5c.**; per dozen, **50c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

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Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. **40** cents.

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Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.— A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.50; for 200 colonies, $2.00.

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Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., FEBRUARY 27, 1884. No. 9.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

☞ "Queen Introducing" is the title of a small pamphlet of 24 pages, by the Rev. George Raynor, M. A., Rector of Hazeleigh Maldon, Kent, England. It is a paper read at a quarterly meeting of the British Bee-Keepers' Association, on "the Ligurian Queen Bee; her introduction to Alien colonies, and the best means of pure propagation." We acknowledge the receipt of a copy of this pamphlet "with the author's compliments."

◆

☞ Speaking of "Honey Dew," which is being extensively advertised "for chapped hands, lips and face," Mr. H. R. Boardman, of East Townsend, O., writes thus: "How many persons reading this fraud, think you, Bro. Newman, have the most distant idea as to what Honey Dew is? Oh! if we could all learn to call things by their right names. Pure honey is good for chapped hands or for the face, healing and softening the skin." And yet how many there are who are wholly ignorant of the many uses of pure honey.

◆

☞ We have received from *Home and Farm* a neat pamphlet containing the letters of its Florida correspondent, Mrs. L. B. Robinson. These letters are valuable because they truthfully describe all the difficulties new settlers in that State must expect to encounter, and they give just the information about everyday life which cannot be obtained from official reports of pamphlets published by land agents. Every one interested in Florida, should send 25 cents for this pamphlet. Address, *Home and Farm*, Louisville, Ky.

More of Cotton's Humbug.

We have received the following, which explains itself:

I send Mrs. L. E. Cotton's circular for 1884. It is a little ahead of any I have received, up to date. We would like to have a controllable hive, for then we would never fear dysentery or any of the troubles which bees are heir to in wintering. If Lizzie had known that I had read the BEE JOURNAL for the last 12 years, she would not have sent that circular to me. Read it, Mr. Editor, it will do you good; give your readers a few extracts. T. B. QUINLAN.

Cedar Rapids, Iowa, Feb. 4, 1884.

Oh! it is the same old story. If the orders are not filled, and the bees and hives are not sent to customers, is it not easy to prove that bees do not become diseased in winter? and also that there is no danger of any one being stung? That is science for you! The Kansas *Bee-Keeper* gives the following in its last issue:

"We notice that Lizzie Cotton, of Gorham, Me., is still trying to gull the public by her preposterous claims in regard to her controllable, reversible, double-back-action, self-hiving, and automatic drone-destroying hive. This hive, from her description, wlll do everything but talk, and we expect next year to learn that she has educated it even up to that point. We advise our readers to let Lizzie and her wares severely alone."

We have received several of these circulars, but her bombastic falsehoods about the bee-papers and associations are not worth noticing.

◆

Paraphernalia of the Bee.

Some one has sent us a newspaper which gives the following description of the wonderful working tools of the honey bee, with which it does its marvelous work in the hive:

The feet of the common working bee exhibit at one and the same time a basket, a brush and a pair of pincers. One of these articles, indeed, is a brush of extreme fineness, the hairs of which, arranged in symmetrical rows, are only to be seen with the microscope. With this brush of fairy delicacy, the bee continually brushes its velvet robe, to remove the pollen dust, with which it becomes loaded while rifling the flowers and sucking up their nectar. Another article, which is hollowed like a spoon, receives all the gleanings which the insect carries to the hive. It is a panier for provisions. Finally, by opening them one upon another, by means of a hinge, those two pieces become a pair of pincers, which render important service in the construction of the combs, and it is with them that the bee lays hold of semi-circles of wax below its abdomen, and carries them to its mouth.

◆

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

James B. Mason, Mechanic Falls, Me., 60 pages—bees, queens and apiarian supplies.

Wm. Ballantine & Son, Sago, O., 1 page—bees, queens and apiarian supplies.

A. I. Root, Medina, O., 40 pages—bees, queens, and everything needed in an apiary, as well as useful articles for counter stores, of all kinds and prices.

E. C. Hubbard & Sons, Hamburg, N. Y., 8 pages—small fruit plants.

A. J. Norris, Cedar Falls, Iowa, 6 pages—bees, seeds, roots, etc.

J. D. Goodrich, East Hardwick, Vt., 6 pages—hives and bee-keepers' supplies.

Henry Drum, Adelphi, O., 12 pages—hives and apiarian supplies.

Samuel D. Riegel, Adelphi, O., 4 pages—bees and queens.

E. Kretchmer, Coburg, Iowa, 24 pages—bees, hives and apiarian supplies.

W. H. Proctor, Fairhaven, Vt., 4 pages—bees, queens and apiarian supplies.

S. Valentine & Son, Hagerstown, Md., 12 pages—Italian and Albino queens and supplies for the apiary.

F. A. Snell, Milledgeville, Ill., 20 pages—bees, hives and apiarian supplies.

Chas. F. Muth, Cincinnati, O., 24 pages, bee-keepers' supplies.

Howe & Son, Council Bluffs, Iowa, 8 pages—bee-keepers' supplies.

Joseph D. Enas, Napa, Cal., 6 pages—queens and bee-keepers' supplies.

J. W. K. and A. G. Shaw, Loreauville, La., 1 page—bees, queens, etc.

Rev. E. L. Briggs, Wilton Junction, Iowa, 6 pages—bees and queens.

A. E. Foster, Covington, Ky., 1 page—bees and queens.

CORRESPONDENCE

For the American Bee Journal.

More about those Eastern Bees.

G. M. DOOLITTLE.

On page 38 I find an article from the the pen of Mr. Frank Benton, which is as much of a surprise to me (if he really means what he says) as the one I wrote on page 500 of the BEE JOURNAL for 1883 seems to be to him.

He says all my experience in bee-keeping has tended to make me value prolificness in a queen above all other qualities. That he wants them to be so prolific that lots of brood will be reared at all seasons of the year when the weather will permit. That he wants the hive overflowing with bees in the fall of the year, etc.

Coming from a man who has once lived in America, I again repeat, that such words are a surprise to me. If he had modified his first statement so as to make it read that he valued the prolificness of a queen above all other qualities, when it could be so regulated that such prolificness would be of the greatest profit to the bee-keeper, I would hold up both hands for it; but when he writes that he regards the prolificness in a queen at all times of the year above all other qualities, I cannot help but think that the type made him say what he did not mean to say, or else that he is very much mistaken.

Here, where we have but about six weeks during the whole season in which the bees make any gain in honey, what we want is a queen that can be coaxed to fill the hive to overflowing with brood during a few weeks previous to this honey harvest, and lay just as few eggs at all other times as is consistent with accomplishing of the above object. If Mr. Benton had a piece of work which he must accomplish at a certain time if he was to receive any profit therefrom, he would hire his help before that time expired or not at all. If he wished "help" at a certain time, and they did not come until too late, surely he would not keep and board them six to eight months because it was not convenient for them to come sooner. Oh! no, he would tell them he did not want them, for it was too late. So I say, that when he says that he wants the hive overflowing with bees in the fall, there must be a mistake somewhere.

Why I prefer the Italian bees to all others is for the reason that they are more susceptible of being handled, so as to get the hive overflowing with bees at the right time, than are the bees of any other race. Also, that as soon as the honey harvest arrives the queen will cease her prolificness, and thus we do not have a lot of "hungry hands" to board when they are of no use to the apiarist.

To show Mr. B. that I am not alone in this, I will quote the following from one of the greatest honey-producers of the West, Mr. O. O. Poppleton, of Iowa, from page 50 of *Gleanings*, for 1884: "I get very much the best results from my purest and lightest Italians. The Italians seem to be much more disposed to partially stop brood-rearing and bend all their energies to honey-gathering whenever there is a heavy flow of nectar, than any other kind of bees I have tried, and this is a very great advantage." That the Syrian or Holy Land bees cannot be managed so as to get a large amount of brood at any other time, save in a heavy flow of honey, is one of the greatest reasons for my discarding them.

Mr. Benton tries to so twist this sentence around as to make me confess that I cannot accomplish "what is of more moment than any one other thing pertaining to honey-producing," and asks "how does this agree with his reported success in raising comb honey." Seeing Mr. B. wishes to draw me out, I will say that I have never reported success with the Syrian bees, for I have never had any to report. I had one colony of Syrian bees during the year 1883, and 3 till after the honey harvest of 1883 with their increase, and from all I did not get 50 pounds of honey, and had to feed them each fall to get them prepared for winter, taking combs of sealed honey from the Italians to do the feeding with, while the same number of Italian colonies gave over 500 pounds during the same time, with the same management I gave the Syrians. These bees would increase but little till the honey harvest arrived, when they would crowd every available cell with brood, which brood would use up nearly all the honey the few workers, reared before, could gather while the honey harvest lasted. On the contrary, when the honey harvest opened, the Italians would have a hive overflowing with bees and every comb filled with brood, and this brood would gradually decrease till at the end of the harvest I had lots of honey and but few mouths to feed. This is not mere fancy or idle talk, but facts which must be heeded if we would receive a good profit from our bees.

Next I notice Mr. B. admits that these Eastern bees are liable to have laying workers every time a change of queens occurs, but says this is not a bad feature except as the combs are filled with drones before the young queen gets to laying. Well, if this were so, the filling of the combs with drones so that the young queens have little room to lay worker eggs, and the feeding of so much honey to rear useless drones, is an admitted fact sufficient to uphold any apiarist in banishing them from his apiary; but queens are not accepted by these bees, with laying workers present, as easy as Mr. B. would have us think; at least such is not the case here in the United States, as my own experience proves, and also that of others.

On page 82, present volume of *Gleanings*, will be found an account of how these Syrian laying workers baffled all the skill at introducing queens which Mr. Schrock possessed till he gave them combs (bees and brood) from another colony. He also there states (which I also found to be true) that these laying workers so deposited their eggs that the apiarist would suppose they had a laying queen (till the brood was capped over), as these workers lay their eggs more nearly like a queen than do those of the Italians or blacks. Thus the apiarist is "fooled" until all chance of getting the colony in condition to produce honey is passed.

Once more, Mr. Benton says in his closing paragraph, "Mr. Doolittle gets back to the race of bees with which he originally started, the Holy Lands," and then elsewhere takes me and others to task for mixing the names of these Eastern bees. If the name Holy Land was not a correct name to apply to these bees, why did D. A. Jones, the importer of them, telegraph to the Northeastern Convention, while in session in the city of Utica, N. Y., in 1881, "The Holy Land bees are the best." If an importer was calling things wrong, how could those purchasing bees of him be expected to call them otherwise? I see by the last *Gleanings* that A. I. Root calls all bees coming from Syria, Holy Land bees, and he an editor of a bee paper. I used the words Syrian and Holy Land indiscriminately, supposing both meant the same. By Mr. Benton's description, I now see that the bees I had from one party were what he describes as the Palestine bees, and those from the two other parties, were what he describes as the Syrian. As I could not see a particle of difference in them except in color, I do not feel disposed to try the Syrians further, in the vain hope of finding something tolerably fair.

In his fifth paragraph Mr. B. says of the Palestine bees, "they creep under sleeves and cuffs, biting the flesh, and then curving their bodies and stinging." Exactly; and this is a peculiarity of the Syrians and Cyprians as well. Mr. B. is the first one who has ever spoken of these bees biting, I believe. With me this is the most disagreeable of all the bad features possessed by these Eastern bees.

During the past fall, after the snow came, I feared I had been careless with my colony of Texas Cyprians, so I raised the quilt to ascertain if there was plenty of sealed honey near the top bars to the frames. Seeing but little, I marked on the hive, "Give frames of sealed honey the first day the bees can fly." The 10th day of December being warm and fine, I embraced the opportunity to feed them. To procure room in the hive to place inside the two frames of sealed honey, I must take out two frames having little or no honey in them. As Mr. Carroll wrote me that I would have less difficulty in handling the Cyprians if I used no smoke, I placed the smoker well filled and lighted on top of the next hive, and proceeded to carefully raise the quilt. I had not got it half off before two dozen bees or more darted at me. I carefully backed off a dozen steps, with these bees sticking to me, biting my clothes and hands, and receiving about one-half dozen stings. I allowed two or three to sting my hands while I watched them. Some of them would bite a half dozen times before they would sting. Others would bite several times, singing angry notes all the while, when they would fly off two or three feet and then dart back again to sting me the moment they struck my hands. I then found some of them had crawled into my clothes, when presently "several points" made me beat a hasty retreat for the shop. Once in there I killed all that still sang in my pockets and elsewhere.

When I went out I determined to try the smoke for all it was worth. I placed the nozzle of the smoker under the quilt and puffed furiously until the smoke rolled out the entrance, when I stripped off the quilt with one jerk, keeping the smoke pouring on them all the while. With one hand I smoked, and managed to get out the frames with the other. Next I moved back one frame and placed in the full combs in such a position that the honey was in easy reach of the bees; then I closed the hive. The smoke helped some, but in spite of it I received over 25 stings, and killed fully that number of bees which had crawled into my clothes while I was at work, after I returned to the shop the second time. I give the above as an example of some of my trials during the past summer, in trying to see what these new races of bees are worth. In one instance I received 16 stings on my right hand and arm, while at the top of a ladder trying to get a second swarm of these bees which had outwitted me in preventing after swarms. As I could not get out these stings till I reached the ground, I had the most painful and swelled arm I have had for the past ten years.

One more point and I will bring this already lengthy article to a close. It will be remembered that at the Northwestern Convention in Chicago, last fall, Mr. J. A. Green reported the Syrian bees as gentle, while all the rest had found them cross. It now appears that the bees kept by Mr. Green were a cross between the Syrians and Italians, as will be found by reading page 81 of *Gleanings*. Now my experience agrees with Mr. Green's, that a cross between the Cyprian or Syrian bees and Italians, will give us gentle bees and good workers. I also find that any direct cross gives new vigor to our bees, but I fail to find that the crossing of these yellow bees give any better results than does a cross between the blacks and the Italians. The races of yellow bees are so near alike as to color that it is almost impossible to distinguish the hybrid from the pure as to their markings; hence, in a few generations it would be impossible to know in what direction we are breeding. As a cross with the blacks give just as good results, and still allows us the knowledge necessary for knowing the direction we are going, through the markings of the bees I cannot see any reason for mixing these yellow races of stinging, biting, laying workers, out-of-season brood-producing race of bees with our already superior strains of Italians.

If Mr. Benton sees any good reasons why we should do so except the purchasing of queens of him, will he please give them to us through the columns of the BEE JOURNAL.

Borodino, N. Y.

For the American Bee Journal.

Pollen or Farina.

JOHN PHIN.

Mr. Clarke, in his note, doubts the soundness of my criticism on the words, "Pollen and Farina." Allow me to say that the criticism was made only after careful study of not only Webster, but Worcester, Agilvie, Richardson, and also of Balfour's Botanical Lexicon, together with much more that I need not name.

Pollen signified originally fine flour, and is so given by Bailey in his old Etymological Dictionary. In this sense it still survives in the word *pollard*, which signifies a mixture of bran and meal. Originally (in the West), it signified fine dust, and the botanists adopted it to signify the fecundating dust of flowers. At present, the use of pollen in the sense of flour or meal is obsolete, and is so noted in all our great dictionaries. And on the ground that it is always unfortunate when a word has two meanings, I trust that no one will try to revive the old meaning; let pollen mean the fecundating dust of flowers and nothing else.

As regards farina: about the same history belongs to this word, except that it now means flour or meal, and by an adoption from the French on the part of chemists, it also signifies pure starch. Craig, in his dictionary, gives the meaning *pollen*, but it has been rarely used in this sense, which may be considered obsolete.

I have as great an abhorence as any one of hyper-criticism, but surely it is worth while to seek to attain that accuracy and precision which will enable us to say what we mean without circumlocution. I believe with Horne Tooke, that no word should have more than one meaning; and although we cannot always attain this, yet, as my good friend Prof. A. Cook says in a note just received from him, by avoiding these double-meanings, "we can hasten the expurgation of our literature."

Patterson, N. J.

For the American Bee Journal.

An "Improved" Heddon Case.

C. H. DIBBERN.

After making up 80 cases after a pattern from Mr. Heddon, I came to the conclusion that a cheaper and better case could be made. After making several cases that were not entirely satisfactory, I hit upon the following, which I think even Mr. Heddon will regard as an improvement.

I make the outer rim just like the Heddon, allowing ⅝ inch bee space over the sections. If glass is wanted, so as to see what is going on inside, I use 1½ inch strips on top and bottom of sides, rabbitted for a strip of glass to come just even inside (a board like Heddon's will do just as well). Glass, of course, requires an outer cap for the hive. Now tack on strips of tin on the bottom edge on all four sides, so it will project ⅝ inches inside for sections and section supports to rest on. These supports are made by taking 1¼ wide, and as long as your case is wide inside. Have a square corner made lengthwise, so that two of these pieces will make a **T** when soldered together. These are for the sections to rest on, and are simply laid in the bottom of case, the ends resting on the projecting tin strips. The sizes of cases must be gaged, by the size of your sections and hives.

The advantages I claim are, that it saves the lumber for partitions. It is easily adjusted to a slight variation in size of sections. If separators are to be used, the T support makes an admirable rest for separators. The supports allow the sections to come so close together, that the two thicknesses of tin between them cannot be noticed. That, of course, economises the room occupied by the wooden partitions, and also the heat of the bees. When the sections are filled, the cases are easily emptied by turning them up-side-down, and pushing out the sections, T supports and all.

I shall have this case on exhibition at the coming Davenport convention; also an entirely new shipping case, which I will describe in the BEE JOURNAL hereafter.

Milan, Ill.

For the American Bee Journal.

Some Important Suggestions.

AMI CROSS.

Though you may not all have heard of me, I have dealt in supplies for years, and had a large correspondence of all sorts in the bee-keeping line. I have experienced many trials with this correspondence, and take this opportunity of trying to correct some of the mistakes of bee-keepers in the line of correspondence, etc.

I am thinking that it would save a good deal of trouble, loss, and nervous exhaustion if a few little details were properly attended to, and a few little alterations made in apicultural diplomacy and etiquette.

Do write your name plainly. Always mention your county. In writing to a business firm, or any person of large correspondence, never take it for granted that they know you, or where you live, or your shipping address, even if you have written to them fifty times before. Always make everything clear and plain.

While your signature looks to you the plainest of any word you write, remember to others of all words it is the most obscure. In making an order for goods, NEVER write anything on the sheet except the order and shipping directions. Use another sheet upon which to tell your dealer all about what kind of bees you like best. How many colonies you have in the cellar, and how many neighbor S. has out-doors, and what you expect to do two years hence, etc., etc., etc., and then the poor over-taxed book-keeper and secretary can throw that part right into the waste basket without ever having to read it all over to see if some directions for shipping is contained therein, and go on with the next 39 letters of the morning mail.

In ordering a circular, make just as few words as possible. If you give your dealer brevity, he will repay you with promptness, and likely throw in considerable admiration. Each writer naturally feels as though he was the only or main customer; as though his deal was the most important one of the season. It is to him, but as it is not with the dealer, do not forget to govern yourself accordingly. Do not ask for credit; no matter how financially responsible you may be. 1. Your dealer does not know that, and 2, if he did, as he is doing a cash business, his system of book-keeping is such that it makes him much more trouble to run an additional credit system than it does you to send cash with the order. If you do not know that a dealer is responsible, do not send him money till you find that out, but if you do, and lose it, do not ask some one else to pay it, nor attach blame to any person but yourself.

Use only Full Government, high-cut envelopes. If you use the others, your letters will be glued fast to the inside of them, and the annoyance is far greater than the difference in cost. The manufacture of low-cut envelopes should at once become a lost art. No one of taste and experience will use them.

In writing, study concentration and brevity. How shall we head our letters? "Mr. John Smith, Dear Sir." Why that? "Friend Jones." Why use such a term as friend promiscuously? Does it savor of any thing wise or good? Why say "Yours Respectfully," or "Truly" in a business letter? Let us leave off all prefixes and affixes except the writer's signature, or say merely as a prefix, "Mr. Brown," and then go right to business. If we are to make general use of any term exclusive to the fraternity, I am in favor of Dr. Miller's favorite, viz: "Brother," written "Bro. Doolittle." How does that sound? It is a smooth and pretty term, and is applicable to friend or enemy. We can then use the term friend to those whom we have good and valid reasons to believe *are* our friends, whether bee-keepers or not. Pshaw, are not "Dear Sir," "Yours Truly," etc., all taken for granted? Please give us your opinion and send off, "Bro." Newman.

Jericho, Del.

[Our correspondent gives some very good suggestions, which should be heeded by correspondents. We detest the indiscriminate use of the word "friend," and very seldom use it, except to those whom we have proved as *friends*. It savors of "cant" to use it in business correspondence.—Ed.]

For the American Bee Journal.

Drones from Worker Eggs.

S. J. YOUNGMAN.

The views of C. Theilman, given on page 594 of the Bee Journal, are so like mine, given at the Northern Michigan Bee-Keepers' Convention in October, 1883, held at Sheridan, Mich., and also like a more recent article on the same subject by B. F. Carroll. This places me in a better postion before the bee-keeping fraternity, especially as you say in your editorial criticism, "It will be very generally disbelieved that bees can and will rear drones from worker eggs." I think that the "old heads" will be obliged to believe, and also admit, that drones are often reared from worker eggs, even if it does clash a little with the teachings of some of our veteran writers and scientific bee-keepers. I also think that it will encourage some who are undoubtedly sometimes afraid to give their views to the public, especially those views pertaining to new discoveries, for fear of being held up to ridicule.

Cato, Mich., Feb. 4, 1884.

The Michigan Law on Foul Brood.

Many are asking me about our law on foul brood, I thought it might be well for it to be published in the Bee Journal. I wrote it with much care, and think it pretty good. A. J. Cook.

To prevent the spread of foul brood among bees, and to extirpate the same.

Section 1.—*The People of the State of Michigan enact,* That it shall be unlawful for any person to keep in his apiary any colony of bees affected with the contagious malady known as foul brood; and it shall be the duty of every bee-keeper, as soon as he becomes aware of the existence of said disease among his bees, to forthwith destroy or cause to be destroyed all colonies thus affected.

Sec. 2.—In any county in this State, in which foul brood exists, or in which there are good reasons to believe it exists, it shall be lawful for any five or more actual bee-keepers of said county to set forth such fact, belief or apprehension in a petition addressed to the judge of probate, requiring him to appoint a competent commissioner to prevent the spread of said disease, and to eradicate the same; which petition shall be filed with, and become a part of the records of the court where such application is made.

Sec. 3.—It shall be the duty of the judge of probate on the receipt of the petition specified in section 2, of this act, to appoint within ten days thereafter a well-known and competent bee-keeper of said county, as a commissioner, who shall hold his office during the pleasure of said court; and a record of such order of appointment, and revocation, when revoked, shall be filed as part of the records of said court.

Sec. 4.—It shall be the duty of said commissioner, within ten days of his appointment as aforesaid, to file his acceptance of the same with the court from whom he received appointment.

Sec. 5.—Upon complaint of any two bee-keepers of said county in writing and on oath, to said commissioner, setting forth that said disease exists, or that they have good reason to believe it exists within said county, designating the apiary or apiaries wherein they believe it to be, it shall become the duty of the commissioner, to whom such complaint is delivered, to proceed without unnecessary delay to examine the bees so designated, and if he shall become satisfied that any colony or colonies of said bees are diseased with foul brood, he shall without further disturbance to said bees, fix some distinguishing mark upon each hive, wherein exists said foul brood, and immediately notify the person to whom said bees belong, personally or by leaving a written notice at his place of residence, if he be a resident of such county, and if such owner be a non-resident of such county, then by leaving the same with the person in charge of such bees, requiring said person, within five days, Sundays excepted, from the date of said notice, to effectually remove or destroy said hives, together with their entire contents, by burying them or by fire.

Sec. 6.—If any person neglects to destroy, or cause to be destroyed said hives and their contents in manner as described in section 5, after due notification, he shall be deemed guilty of a misdemeanor, and punished by a fine not to exceed $50 for the first offense, and for each additional offense he shall be liable to a fine not to exceed $100, at the discretion of the court; and any justice of the peace of the township where said bees exist, shall have jurisdiction thereof.

Sec. 7.—The commissioner shall be allowed for services under this act, $2 for each full day, and $1 for each half day, the account to be audited by the board of supervisors.

Sec. 8.—In all suits and prosecutions under this act, it shall be necessary to prove that said bees were actually diseased or infected with foul brood.

For the American Bee Journal.

An Analogous Case.

O. L. EARLLE.

On page 102 of the Bee Journal, Mr. B. F. Carroll claims that the male sperm lodges in the mucus covering of the egg, and that it can be removed by the bees, thus changing the sex of the egg when the welfare of the colony demands it. The theory becomes more reasonable if we can find a similar case in nature. For instance, the female fish first lays her eggs, and is closely followed by the male, who sprays the fertilizing fluid over the eggs. Still greater success in their fertilization is made in the fish nurseries by gently pressing the eggs from the female into a bowl, and then over them, with the milk from the male, obtained in the same manner. To my mind, Mr. Carroll's proposition of the queen's eggs being fertilized on the outside of the eggs, lends additional strength to the Dzierzon theory.

Green Castle, Ind., Feb. 19, 1884.

For the American Bee Journal.

Wood Separators.

C. R. ISHAM.

A few reasons why I prefer them, also some of the objections to the use of any separators, considered.

In a previous article in the BEE JOURNAL, I claimed that with separators, the combs are built true and of even thickness, thereby admitting of glassing, which for neat and improved appearance, I consider indispensible, especially if we wish to put our honey upon the market in the most attractive and salable shape, and avoid leaking and mussing, with which both dealer and consumer become more or less disgusted. We prefer wood separators cut 1-16 inch thick, as they are lighter, cheaper, warmer, and make a wider entrance for the bees to get into the sections, which is now considered to be of great importance.

The first and principal objection to their use, is that more honey can be obtained without than with them. How can we better judge as to correctness of these claims than by a comparison of results? Taking the report of Mr. James Heddon, a strong anti-separator advocate, and comparing it with my neighbors, Messrs. J. C. Newman & Sons, I find that for several years from an average number of colonies, they have obtained about double the amount of surplus honey; I find that Messrs. Bean and Van Eaton, of York, and also the Messrs. Benedict, of Perry, can report a far better average than I have seen in the figures used by anti-separator advocates.

One report which I will make special mention of, is that of Mr. P. D. Jones, near Mt. Morris, N. Y., who has, from 90 colonies, spring count, during the past season, obtained some 12,000 lbs. of comb honey. Were it necessary, I could give several other reports which have come under my observation, as within what we term our "bee circle," embraced in the counties of Wyoming and Livingston, there was last year produced a crop of some 100,000 lbs. of section comb honey. This large amount was produced by a limited number of apiarists who mostly make a specialty of the business, and nearly all of whom, after years of careful experimenting, are now using wood separators.

Here is a query: When a colony of bees are working at full capacity, and so intent upon storing in sections, that at the close of the yield they have in some instances, as was the case this fall, only from 2 to 6 lbs. of honey in the brood chamber, with 100 or more pounds stored in surplus arrangements above,—how in the name of reason could more honey be obtained by dispensing with separators? Here I claim another point for wood separators: They can store in tiered sections to better advantage, as they have two bee spaces instead of one, and can use the separator to travel over instead of passing, or crowding through the bees at work upon the comb in the lower tier.

I think that apiarists will agree with me, that comb honey can be more profitably built 1½ inches thick than any thinner, as only the same amount of capping is required. This narrowing of the sections down to 1¼ inches in width in order to do away with separators, and using ½ lb. boxes, is bringing the whole business of producing comb honey down to the same contracted proportions—uncalled for by dealer or consumer, and at best, only a whim of some apiarists whose main ambition seems to be to bring the honey business down to dimensions corresponding with the size of section the advocates use. I think it an advantage to use separators, although not wishing to glass the honey, as by fastening strips across the separator for the edges of the sections to rest against, they will be filled flush, and are ready for crating without danger of chafing; or, if desired, put into paper boxes, which is now a popular way to put it up for market.

Since writing the above, I see that in February number of *Gleanings*, among the editorials on page 101, that Mr. A. I. Root writes as follows under the heading of Wooden Separators: "These seem to have lost favor. Dr. Besse mentioned at the convention that although he made and sold a great many of them, he had discarded them. The principal objection seemed to be that they will warp. This might be obviated by making them thicker; but this would increase the expense, and also occupy valuable room in the brood apartment. If separators must be used, tin seems to be the best material to occupy little space without being affected by the dampness of the hive."

There is more absurdity contained in the above quotation, than in any thing I have read pertaining to intelligent bee-culture, for several years past. From the reports I have given, does it look as though they had lost favor?

At the last annual February meeting of the Northeastern Bee-Keepers' Association, held in the City Hall at Syracuse, N. Y., and which was probably as large an assemblage of bee-keepers as often meet together—at times the whole seating capacity of the hall being filled, the subject of using separators was discussed, and no one spoke against them, and the question was decided in their favor by an unanimous vote. Does this look like having lost favor with New York and New England apiarists, whose record the past season as successful honey producers gives authority of the highest character to their expression upon the subject?

Their warping, as Dr. Besse is spoken of as having mentioned, has not been our experience, especially when used in racks and brought together by following boards, which I consider far ahead of wide frames for top storing. When cut from properly-seasoned and suitable lumber, and afterwards slightly steamed, then pressed and dried (which is easily done), they are almost as flat as boards, and of 1-16 inch in thickness do not check or split to any amount, or do not sink when the edges of two sections chance to mismatch.

Mr. Root's suggestion to make them thicker is unnecessary, and for economical and successful using, impracticable, and evidences that he has not had much, if any practical experience with them; besides, what do we want of them in the brood chamber? That they are affected by dampness, is something I have never seen, although I have had them in use more or less for the past 15 years. How can dampness from the bees affect storing attachments, when it is warm enough for bees to store honey in sections? I leave the question for some novice in bee-culture to answer.

After becoming convinced that wood was more desirable, I laid aside (or sold for half cost) some 2 or 3 thousand tin separators, and could not be induced to return to their use if they were furnished me gratuitously, and I think most of my bee-keeping neighbors will bear me out in making this assertion.

Peoria, N. Y.

[It should, perhaps, be stated that while the Eastern markets require glassed sections of honey, in the West they are of very slow sale. Consequently this modifies the argument concerning the use of separators. If the honey is to be glassed, separators cannot be dispensed with.—ED.]

Indiana State Convention.

The fifth annual meeting of the State Bee-Keepers' Association convened in Indianapolis, Jan. 15. The Indiana *Farmer* says: The meeting was called to order promptly at 10:30 a. m. Vice-President Johnson in the chair. The reports of the several officers showed the society to be in good condition and full of life. Dr. J. H. Orear called attention to the work of the society, and what was expected would be gained by a close adherence to the rules of the organization. The President said that members should pay strict attention to business, work promptly, and above all call things by their proper names, thereby helping all beginners to a fair understanding of just what was meant during the discussion of the several subjects as they came before the meeting.

Spring management was the first question of general interest brought before the meeting. Mr. Davis believed that early feeding must be resorted to for the best results.

Mr. Lane also practiced early feeding to stimulate brood-rearing. He commenced his spring work first by giving all his hives a thorough cleansing of all dead bees, cappings, and the usual filth which accumulated in the hives during the time the bees were confined. He preferred candy for early spring feeding, as it was better to supply the bees in the hives than to entice them out during high cold winds.

Dr. Orear's plan was much like those already given—feeding syrups, rye meal in lieu of pollen, and a judicious spreading of the combs, as the cluster increased.

The Secretary: Care should be taken in reference to spreading the brood cluster, as much damage was often caused by spreading too fast; wait until the first five or six frames become well crowded, before giving more room.

Hatching brood led to the subject of the best bees for all purposes. Mr. Mason had seen some good workers among hybrids, but believed none were quite so good as the Italians.

Mr. Shaw said that the real dependence was more in the honey to be had, than in the kind or quality of the bees.

Mr. Raab had tried all kinds of bees, and was decidedly in favor of the Italians.

The President, in an address, remarked that progress is the watchword of the bee-keeper, wherever found, and was the principle that organized this association, and has kept it alive and will maintain it. The idea of all associations of whatever branch of industry, should be to extend the benefits of that industry to the masses. and not to hedge it in to the selected few. We lose nothing in any science or art that we may have obtained by giving that knowledge to our fellow man that he may not only benefit by our experience, but return his own likewise.

We need not fear the overstocking of our State with bees in the near future. We have but a small number of colonies in this State comparatively. The statistics of April 1, 1883, show but 78,526 colonies, and that they gathered 798,368 pounds of honey. Mr. E. T. Sturtevant, of Cuyahoga county, Ohio, an extensive bee raiser, in an article published in 1857, says that in his opinion, on an average, 200,000 pounds of honey go to waste in each county annually for the want of bees to gather it. Let us reduce that one-half for Indiana and say that the honey bearing trees and plants produce 100,000 pounds per county annually, and we have 9,700,000 pounds of honey. Of that amount we gathered in 1882, 798,368 pounds, leaving 8,901,632 pounds ungathered. With this estimate and these figures before us we need not be alarmed about overstocking the State with bees. This ungathered honey, at the present retail price, would bring nearly $2,000,000, which now is a total loss to the wealth of the State, and I have no doubt that the honey yield can be materially increased by the special cultivation of the honey bearing trees and plants.

A letter was then read from Prof. Smart, of the Purdue University, on establishing an apiary at the college. He said: "After consulting with Prof. Latta, we have concluded to recommend to the board of trustees, that the effort be made to encourage that branch of economic industry. I doubt not that the project will be approved provided the legislature makes an appropriation sufficiently large to enable us to carry on our present work and to add what is suggested."

The following was then passed: *Resolved*, That the thanks of this association be, and are hereby tendered to President J. H. Smart, of Purdue University, for his interest in apiculture as indicated in his letter, and that we hereby pledge that our individual and aggregate influence shall be used upon our next legislature for an appropriation sufficiently liberal to enable the University to conduct satisfactory experiments in our favorite industry.

Mr. C. F. Muth then gave his plan of preparing bees for winter. He thought it very essential that plenty of room be allowed for the bees to pass from one frame to the other, *en masse*, and preferred passages through the combs near the centre. Direct ventilation through the hives he thought bad for the bees, but believed it very necessary that provision be made to allow the escape of moisture which naturally arises from them during the cold weather.

The Secretary's plan was but little different from that of Mr. Muth, only that the latter used dry leaves in the second story of the hives as an absorbent and protection from the severe cold. He had noticed that the colder the weather the greater the exudation arising from the bees. He thought that with plenty of stores, from 25 to 30 pounds of honey, free passage for the bees from frame to frame, and for the escape for the dampness, with good protection from outside dampness also, a good colony of bees had the advantage of all that we really know as to what is best for them in winter.

Dr. Orear favored in-door wintering. but this season was wintering on the summer stands; was not now able to say how well his plans were succeeding.

In the evening the election of officers was held, and resulted as follows: Mrs. Irvin Robbin, President; Mrs. E. Stout, Treasurer, and Frank L. Dougherty, Secretary.

The session was then taken up in discussion; the subjects being "Clipping the queens' wings," "Feeding bees in cold weather," and "The desirability of producing comb or extracted honey."

The business of the second day was entered into promptly at 9 a. m. with the question as to the advisability of having the proceedings of the convention printed in pamphlet form and sent to bee-keepers throughout the State, and while it was considered impossible to supply even a small part of the number in the State with copies in the present condition of our finances, the Secretary was instructed to send out as many as possible.

Reports were heard from the several county societies, and of the good the organization was doing throughout the State, and plans were discussed for the continuance of the good work. The Secretary was instructed to assist as far as possible in the organization of county societies, and to show to the friends as far as possible that this body was purely a State institution; not being run for a favored few, as had been asserted by some, but free and open to all; also that our constitution and by-laws prohibit the likelihood of anything of the kind; and that the society is fostered, in connection with the other societies, by the State Board of Agriculture.

The afternoon session was opened with the farther discussion of the best plans and arrangements for work in the apiary, and the time was fully taken up until the arrival of Gov. Porter, further debate being deferred to hear the Governor's address. The Governor said that he had proved by examining the State statistics that for the year ending April 1, 1880, the production of honey was 1,097,634 pounds. In 1881 the production declined to 690,141 pounds, and in 1882 it had declined to 420,204. It further appeared from the statistics for the year ending April 1, 1882, that there was a loss of 38,357 colonies of bees. The decline manifestly came chiefly from destruction of bees, owing to the insufficient supply of food in certain parts of the year, from unfavorable weather, and from the destruction of bees in winter.

The chief attention of bee-keepers should be directed to producing plants for bees, with reference to withstanding drouths and other unfavorable conditions, just as prudent stock raisers cultivate a variety of grasses so as to meet the conditions of drouths and a too great excess of moisture, some grasses flourishing in very dry seasons, and some flourishing particularly in wet ones.

An interesting discussion of the Governor's remarks followed at the close of the address. The association adjourned at 4 p. m.

For the American Bee Journal.

Paste for Labels on Honey Pails.

ELLIS MEAKER.

Some days ago I received a few cans of extracted honey, brought to me in an open sleigh. The paste used for putting on the labels was so unfit for the work that two of the labels had fallen off whole, and several more were more or less loose, and could be easily removed without tearing, and on several cans the labels were considerably torn by the handling or rubbing against each other on the road. The otherwise neat appearance of the goods was thus very materially hurt.

Some years ago, a friend engaged in a drug store, noticed that the labels on tin packages, which they received from one New York house, adhered very firmly, while those on the packages from another house, were more easily removed or marred, although the tin had the appearance of having been sand-papered or otherwise roughened in order to overcome the difficulty. He secured the receipt for making the paste used in the first case, and as I have used it and know it to be excellent, I herewith give it for the use of bee-keepers.

Make a flour paste just as your wife does for papering walls, except rather thinner. If your wife cannot make a good paste, ask some other man's wife. When nearly done, add about one-eighth as much of the cheapest Porte Rico molasses that can be got, and cook for about 10 minutes longer, stirring continually to prevent burning. If too thick to spread easily (as will probably be the case), thin with warm or hot water, mixing well before using. If lumpy, squeeze through a cheese cloth or a stout, loose-woven linen towel. Do not use a molasses that is adulterated. I get mine at a grocery that has a large Irish trade.

This paste, if well made of good materials, will fasten paper or cloth firmly to metal, earthenware or other packages, and labels put on with it will bear rough usage without marring. I have lately had occasion to think that perhaps a good quality of sugar might take the place of the molasses, but do not know. If it would answer, the advantage in using it would be the less difficulty in getting it.

Owaseo, N. Y.

* * *

Haldimand, Ontario, Association.

A meeting of this association was held at Jarvis, on Monday, Feb. 11, pursuant to adjournment. Minutes of the previous meeting read and approved. The membership fee was made 25 cents.

The question of the best method of wintering bees was then taken up. Mr. Kindree winters his bees on the summer stands, in chaff hives, with plenty of stores. He puts a division-board in the front part of the hive, and fills the space with chaff, and has success.

The President winters his bees in a clamp, with a foot of chaff all around them, and a place of exit through the chaff. This is the first winter he had tried it, and does not know how they will succeed.

Mr. Armstrong winters his bees in a shed or clamp, with 10 inches of chaff on the south side, and a foot on the north side, and 18 inches of sawdust on top. They are doing well, and he thinks they will come through all right.

Mr. Kitchen urged the importance of having plenty of young brood late in the fall, with plenty of stores, and he would almost guarantee them to come through all right.

The Secretary and Mr. Buckley gave their experience on cellar wintering, and thought it a very good plan.

How to prevent spring dwindling? The President thought the great cause of spring dwindling was allowing the bee to fly out too early in the spring, and becoming chilled; they were unable to return. One great preventative was to devise some means of keeping the bees in the hive until the weather is warm enough for them to fly.

Mr. Kitchen kept his bees closed up as long as possible, and after allowing them a flight, he kept them closed up for another month, or until the weather was warm, and fed them until they commenced to swarm.

The President gave some interesting reminiscences of early bee hives, and recommended the Jones hive as being easy to handle, and simple in its operations.

Mr. Vanderburgh spoke in favor of the tenement hive as being an easy hive to handle, and an excellent one in which to winter.

Mr. Kitchen spoke in favor of a hive of his own make, and thought it was ahead of any in use.

The Secretary mentioned a few points which he considered essential, and thought the Jones hive about filled the bill.

The account of E. C. Campbell, for printing, $4.25, was ordered to be paid.

The next meeting will be held at Hagersville, on the 30th of May, at 10 a. m.

Subjects for next meeting: "Best race of bees;" "Best way of putting up extracted honey;" "A report of losses during the winter and spring."

A vote of thanks was given to Mr. Kitchen for his attendance at the meeting, and for the information given in his remarks on the subjects under discussion.

E. C. CAMPBELL, *Sec.*

* * *

For the American Bee Journal.

Below vs. Above, for Section Honey.

ALLEN PRINGLE.

I notice that Dr. G. L. Tinker thinks it "impossible to get nicely capped, clean, white and beautiful combs either at the sides of or between brood combs." Some other bee-keepers are of the same opinion, contending that the upper stories are the places *par excellence* for producing good section box honey.

I beg to say most respectfully that these gentlemen are mistaken. I have produced as beautiful section box honey in the lower story or brood-chamber as can be produced above. This is the way I do it: When the surplus honey season is in, having got the colonies intended for section honey well developed and strong, occupying from 8 to 12 brood frames. I take from a given colony (that has, say 10 frames) 3 frames away, leaving all or nearly all of the bees behind. There will be now remaining in the hive 7 of the best brood frames with an abundance of bees. I then dispose these 7 frames in the front part of the hive—those having most brood in the fore front, and those having least (one perhaps with drone comb and honey) furthest back from the entrance.

The reader will bear in mind that the frames of this hive—the Jones hive—hang parallel with the entrance. I now hang 2 or 3 frames of sections containing 9 each immediately behind the brood frames, thus filling up the hive. The section frame used has 3 strips of tin something over 3 inches wide tacked on one side of it directly over the three rows or tiers of section boxes which are 3½x4¼ inches in size—the longest measure (4¼) crossing the tin strips at right angles. This leaves a narrow entrance into the section boxes at the top and bottom of each row.

In putting in the frames of sections, this tinned side must of course be put *facing* the nearest brood frame, and the next frame put with its tinned side facing the open side of the first one, and so on, placing divison-board behind all if needed to fill up. Sometimes the perforated zinc division-board is useful between the brood frames and the section frames, but I have never yet had occasion to use it, though the perforated metal as prepared by D. A. Jones is very useful for various purposes. I have never been troubled with the queen in the section boxes, nor with pollen. But the brood frames must be kept clear for the queen. Keep the extractor going upon them whenever necessary. And if the honey flow is abundant, you will have the satisfaction of taking out a full case of well-capped, beautiful honey every two or three days. The section frame nearest the brood frames will be filled and finished first. Upon removing it shift the nearest one to it (which is perhaps half full) up in its place, and put in an empty one behind all. Upon opening a hive to take out the full section frame, should you find two or three sections not fully capped over, it is, I think, bad policy to put it back again to wait for a full finish. Take out two or three unfinished ones and put them in your empty frame.

From my experience I am very strongly in favor of the lower story for section box honey, especially in a hive like the Jones hive, where the frames hang across the hive, and you can put your section boxes in the rear instead of at the sides. In such a hive I can get far more section-box honey below than above, and of a quality as good as any.

When, therefore, I notice the incredulity of some leading bee-keepers on this point, I feel amused as well as surprised. Of course it requires attention and skillful manipulation, but with those elements it can be made a grand success.

I am not condemning other methods of getting section-box honey; for I practice other methods myself in other styles of hive, but this is my most successful one. I am only refuting the notion that it is impossible to get first-class section honey in the brood-chamber.

Selby, Ont., Feb. 5, 1884.

* * *

For the American Bee Journal.

Bees Flying in Winter.

S. B. ATWATER.

Should bees be restrained from flying while the ground is covered with snow?

This is a question in the wintering problem, which, at the present time, is of interest to me. My experience, so far, has been confined to wintering bees on the summer stands. During the winter of 1880 and 1881, I had a dozen colonies that were confined to their hives from the middle of November to the 2d day of March, and during the most of this time the hives were so covered with drifts of snow that no part of them could be seen. During all that time the weather was too cold to disturb them to ascertain their condition.

On the morning of March 2, the sun shone bright and warm; in the warmest part of the day, the thermometer stood at 70° in the shade. The ground, at this time, was completely covered with snow, but it melted so fast that day that a flood of water was sweeping down all the ravines during the afternoon.

About 9 o'clock in the forenoon I shoveled the snow away from the hives, so as to open the entrances. The bees came out for a general fly, and seemed to enjoy themselves. Bees were observed to alight on the snow, but the weather being so warm they were enabled to arise again. As the sun went down, and the bees finally returned to their hives, a few dead bees were to be seen on the snow, but not enough to indicate that the colonies had met with any great loss. The next winter, being an open one, there was no loss of bees in this locality on account of snow.

In the winter of 1882 and 1883, I had 75 colonies on the summer stands that had no flight from the latter part of November to the middle of February. During a great portion of this time the weather was extremely cold. From the first to the 10th of February we had a good many days that the sun shone very bright, but the mercury in the thermometer was all the time below the freezing point. Yet, notwithstanding the coldness of the weather, at every hive which was not covered completely with a drift of snow, some bees would every day dart out, drop and wallow a few seconds in the snow, but none lived to return to the hives.

From the 10th to the 15th of February there were slight indications of a thaw, and the bees were so anxious to fly that I shoveled snow against the front of the hives, covering the entrances. The morning of the 16th of February was cloudy, and although the temperature was above the freezing point, so long as it remained cloudy, the bees were quiet. But about noon the sun broke suddenly through the clouds, and in a minute the air was full of bees. The thermometer, at noon, stood at 45°. Towards evening a cool breeze sprung up. Bees would fall in the snow, and it appeared to be too cold that day for a resting place. Many would spin around on their backs awhile, but would get too much chilled to rise again. The next morning, the snow for 30 or 40 rods in all directions from my apiary was thickly peppered with the bodies of dead bees.

In the spring there were live bees in every hive, but many of the colonies were greatly weakened by their February flight. This winter my bees have been confined since the middle of December. I have 90 colonies, mostly in double-walled hives, on the summer stands. The ground is now, and has been for the past seven weeks, covered with snow. During this time we have had some very cold weather; on the morning of the 5th inst. it was from 32° to 36° below zero, as measured by different thermometers in this neighborhood. Every day now that indicates a thaw, I am watching, and if many bees fly out, I close the entrances of the hives either with snow or little blocks. Am I doing right? This is a question I would like to have some advice about it.

If the entrances of the hives should be closed while the ground is covered with snow, and the temperature is low, what is the best method of doing it? There are many readers of the Bee Journal who have had more years of experience in wintering bees on the summer stands than I have, and if there is as much danger from loss by their untimely flights as I apprehend, is not this a good question to discuss?

Viola, Ill., Dec. 27, 1883.

SELECTIONS FROM OUR LETTER BOX

Drones Flying.

Here, bees winter on their summer stands without packing of any kind; they have wintered well, so far. I had 78 colonies last fall, and now have 77 all in good condition. My bees were all flying to-day. One colony had drones with a good young queen in the hive. I harvested 3,000 lbs. of honey last year, and sold it at 9 and 15 cents per pound. I use square frame, 11x12, and the top-bar is 14 inches long, and 10 to a hive. Sweet clover is of no use for us. I sowed a pound 2 years ago, and it bloomed the second year, but there was not a bee seen on the bloom.

Inglefield, Ind. John Ferstel.

Request for Mr. Doolittle.

We have had the coldest weather this winter ever known in Kentucky. The mercury registered as low as 30° below zero. We had snow on the ground through the whole of January. Notwithstanding the severe winter, our bees have wintered well so far. I opened five hives on Jan. 14, and found sealed brood in two of them; the third one had a nice patch of eggs in one comb. Of course such queens would be condemned in Michigan, and probably get their heads pinched, but they are just the kind we Kentuckians expect the largest yields of honey from, and are rarely ever mistaken. I spent the most of to-day with my bees, putting in division-boards, and shaping the brood-nests according to my notion. I found young bees hatching in most of my hives. I began last season with 25 colonies of my own, and 6 on shares, making 31 in all. I took 4,225 lbs. of honey from them; about 100 lbs. in the comb, the rest extracted. My best colony gave 306¾ lbs. It was gathered in a little less than two days 31 lbs.; in seven day 102 lbs., all from clover. We have no basswood. My 25 colonies last spring, count to-day 33. The 6 I had on shares now count 9; all in good condition. I had only 4 swarms from the 31 colonies. I would like to ask Mr. Doolittle to write an article for the Bee Journal on the habits of bees. What I mean about habits of bees, is this: If we attend to our business and get the queen in the habit of sticking to the lower story, will she not be likely to stick to that habit? Also, if we get the workers in the habit of storing their first honey gathered in the spring of the year up-stairs, or just where we want them to, are they not likely to keep to that habit? and wont they teach their younger sisters the same habit. I have sometimes thought the reason that some could not get Italians to work in surplus boxes, was because they allowed too much room in the brood-chamber for storing honey in the spring, and when the brood-chamber became full, they preferred to swarm or hunt up another brood-chamber rather than give up their old habit and go up-stairs; hence, it is said by some, Italians will not work in boxes, and are early swarmers. We know Italian queens are prolific, and must have room to spread themselves.

A. C. Cunningham.

Salvisa, Ky., Feb. 5, 1884.

Stimulative Feeding Not Good.

My 122 colonies all answered to roll call to-day, and are having a splendid flight. Not the slightest sign of dysentery in a single colony. For a number of years I have practiced feeding unbolted rye-meal or flour, to stimulate early breeding, and it has done it; but I am satisfied it has done my bees more harm than good. W. J. Davis.

Youngsville, Pa., Feb. 19, 1884.

Sweet Clover.

Saturday, Feb. 2, was a pleasant day with us, and the bees had a good flight, and seemed to be in good condition. They spotted the snow some, but no bees dropped on the snow like they do sometimes. The hives are dry, and there are no dead bees on the bottom board. The prospect for successful wintering is good so far. I have received several inquiries in regard to the qualities of sweet clover as a forage or fodder plant for cattle. To be honest about sweet clover, while it is one of the best honey plants to my knowledge, I must own up that as a pasture plant for cattle, it is almost worthless. With us they will not eat it, if they can get anything else, and as for hay, I would not suppose any one could recommend it, for the stems are coarse and hard, almost of a woody nature, so utterly different from all other clovers that I do not see how any one could recommend it for fodder. There is, however, one other use for sweet clover besides honey producing, and that is its fertilizing qualities. I believe that from its enormous growth and extremely deep rooting nature, it can be classed among one, if not the best for fertilizing worn-out soils. I have known it to root two feet deep, and it generally makes a growth of six feet high, and of the rankest kind on our poorest soils. H. S. Hackman.

Peru, Ill., Feb. 6, 1883.

How to Test a Thermometer.

Mr. Yoder asks on page 91 how to test his thermometer. The following is from instructions sent from the signal office at Washington to their observers at signal stations:

"The accuracy of all thermometers at each station will be tested on March 31, June 30, Sept. 30, and Dec. 31 of each year in the following manner: Place the thermometers to be tested in the vessel provided for this purpose, keep them in a vertical position, pack finely-pounded ice around them to a height a little above the freezing point, and let them remain for one hour, at the expiration of which time read of the height of the mercury, without removing the thermometers from the ice." I use a baking powder case.

Can Mr. W. Z. Hutchinson tell us any more about "feeding back" for honey, than he has done on page 656, volume of 1883. WM. F. WARE.

De Witt, Neb.

Errata.

In the article on "How to Test Thermometers," on page 108; where it says, "The point the thermometer shows is freezing point, or 32° below zero." It should 32° *above* zero.

CHAS. FAUST.

Harvard, Ill., Feb. 14, 1884.

[The writing was indistinct, and the error was not noticed until it was too late to correct the type.—ED.]

Honey Prospects in California.

Southern California has been blessed with a copious rain of 12 days duration, and raining 13 inches in that time, which makes 19 inches up to date, for the season. The ground is thoroughly soaked. It is the best rain we have had since 1868. It was an old-fashion California rain. The mercury did not get below 50°. As a matter of course, the bee-keepers are rejoicing at the prospect for a large crop of honey. My bees are working lively. Bee-keepers will have a busy time from now on.

J. E. PLEASANTS.

San Diego, Cal., Feb. 8, 1884.

Carniolan Apiary.

I cannot do without the BEE JOURNAL, even if offered a smoker for doing so. My 206 colonies in the cellar appear to be in good condition. I have met with success every season, when so wintered, but I find the chaff hive a failure; it is with me at any rate. I will try the Carniolan bees this summer. I will start an apiary of them about six miles from my Italian apiary, from a queen received of Frank Benton, last fall. I will get some Italians imported from him again this spring. A. J. NORRIS.

Cedar Falls, Iowa, Feb. 16, 1884.

Bees in Good Condition.

My bees flew to-day, for the first in 110 days. My 50 colonies are all in good condition. HENRY JONES.

Chesaning, Mich., Feb. 17, 1884.

Bees in Excellent Condition.

Bees are having a grand jubilee to-day; the first "flight" since Dec. 12. I never saw them so strong in numbers, or in better condition. One queenless colony was dead; the other 56 have plenty of stores, and apparently as many bees as when they went into winter quarters. I use a double-walled hive of my own manufacture, and, of course, winter on the summer stands. GEO. E. HILTON.

Fremont, Mich., Feb. 19, 1884.

Bee-Keeping in Georgia.

The weather has been quite warm here for the last ten days, with considerable rain during the last four days. My bees have wintered well on the summer stands, without any protection, and are gathering their first pollen to-day. No conditions are necessary to successful wintering, other than strong colonies with sufficient stores. I sell most of my honey (extracted) in the Chattanooga market, in tin pails, at from 15 to 20 cents per pound, according to quality. There is no person in this county making a specialty of bee-keeping, and but few are pursuing intelligent methods in the business as a side issue. Why do not enterprising bee-keepers at the North, who are seeking a better field for their business, come to Northwest Georgia, and help us develop our honey resources. Here we have a great variety of honey-producing trees and plants, among which poplar and sourwood are the finest producers as to quality and quantity. Land is cheap, the climate mild and healthy, good water plenty, with an abundance of timber. This certainly is an inviting field to bee-keepers. L. K. DICKEY.

High Point, Ga., Feb. 9, 1884.

Bees Flying.

It is very warm and cloudy, with rain and snow at intervals. Bees were flying yesterday. They spot the snow some; a few very late swarms seem to be the worst. With those having clover honey, it is not perceptible as yet. I shall have something new for the BEE JOURNAL, from my microscopic investigations concerning drones, dysentery, floral farina, early and late swarms, etc.

A. M. FIRMAN.

Quasqueton, Iowa, Feb. 18, 1884.

Bees Getting a Little Restless.

I commenced, in 1881, with 3 box hives of bees; they swarmed 3 times each, and the nine went into winter quarters and came out all right; 3 died in March, 1883. I bought 3 more the same spring. I transferred all from box hives into standard Langstroth hives. I put 24 into winter quarters and lost 3, so in the spring of 1883 I had 21. Last summer I had trouble. I tried to keep them from swarming more than once; when a swarm issued, I noted the date on the hive, when the young queen hatch. I destroyed all the queen cells but one. I lost 6 young queens and had to replace them; 4 swarms came out and left no queen in the hive; in such cases I put them back and give them unsealed brood from another hive. They increased to 42 colonies. For a place to winter in, I excavated in the side of a beaver dam, 2½ feet deep by 12x14, and built two walls of logs 6 feet high, with a 3 foot space between. This is filled and covered with dirt, 18 inches deep. I have 2 ventilators in the top of the cave. I have 2 doors to the entrance, with a place at the bottom to admit fresh air. My hives are all numbered, both hive and cap. I take off the cap and leave it on the stand, and put the hive in; the next hive I set on the first, and so on, until they are all in. That makes the bottom board cover the hive underneath. I think each colony had 35 lbs. of sealed basswood honey, when they were set in for winter. All through December and January they were very quiet; but within the last week they are getting a little restless.

C. S. HAWKINS.

Sauk Rapids, Minn., Feb. 16, 1884.

Convention Notices.

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*

Kingston, Tex., Jan. 16, 1884.

☞ We intend to organize a bee-keepers' association for Southern Indiana on March 20, 1884, to meet at the Merchants and Manufacturers' Club Rooms, Madison, Ind., at 9:30 a. m. Kentucky bee-keepers are invited to participate. H. C. WHITE.

☞ On account of the inclement weather, only a few of the Rock county bee-keepers responded to the call to meet at the Pember House, Janesville, Wis., on the second Tuesday in February, to organize a bee-keepers' association, so we will have another meeting on the first Tuesday in March next, at 1 p. m., at the same place. All bee-keepers are courteously invited, and we hope there will be a good attendance. L. FATZINGER.

Janesville, Wis., Feb. 13, 1884.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*

Independence, Mo.

☞ The Northeastern Bee-Keepers' Association will hold its second annual meeting on Wednesday, March 5, at the Court House, in Lapeer. Hotel rates reduced to $1 per day.

W. Z. HUTCHINSON, *Sec.*

☞ We now club the *British Bee Journal* and our Monthly for $2.50.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Queenlessness.

My bees had a flight on Feb. 11, and I saw that one colony threw out a dead queen. How can I save them at this time of the season, or get a queen? Please answer through the BEE JOURNAL. WILLIAM CULP.
Snydertown, Pa., Jan. 13, 1884.

Is it not more likely that the dead queen was a stranger from some other hive, either your own or your neighbor's? and that the queen in the hive you refer to, is alive and all right?

Spring Management.

How do you prevent "spring dwindling?" Please give in the BEE JOURNAL your system of management for March and April. W. L. GAGE.
Kane City, Pa., Feb. 14, 1884.

The reply to Mr. Oswalt, will give you an idea of what I think of spring dwindling. We try to prevent it by doing all we can to prevent the bees having dysentery during the winter.

Mortality, Brood-Rearing, etc.

The writer has lost only one weak colony, so far this winter, out of 30. One neighbor 2 out of 20; another 1 out of 40; another 5 out of 60. Almost all have commenced brood-rearing, so far as examined or heard from. My bees, for several days, have been carrying in rye meal very industriously. Will they take up more than they can use to advantage?

2. Does Alsike clover bloom as early as white clover?

3. If it blooms at the same time, will it increase the yield of extracted honey? GEO. W. MORRIS.
Salvisa, Ky.

1. Under certain conditions, bees will store up more rye meal than they can use. As soon as natural pollen can be gathered, they ignore the rye flour, and dig out and throw away the bread they made by its use. In this location, they often store large quantities of natural pollen that they dig out and throw away in the spring of the following year, provided they live to do so.

2. Here, alsike clover blossoms with white clover, and is of no special use to the bee-keeper where the latter is abundant.

3. Certainly, it will increase the yield of honey if your field is overstocked; but is it not better and cheaper to prevent that condition of things, by not keeping too many colonies in one field. I think I hear you ask how many colonies are "too many?" I reply, I do not know, and ask, who does? The very important questions of the profitable length of the flight of gathering bees, and that of overstocking, have been much neglected, and at the same time, are of most vital importance to those who are, or ever expect to be specialists in bee-keeping.

Fears Spring Dwindling.

I commenced the winter with 8 colonies of bees, but during the month of January two of the weak colonies died; the rest are all doing well. What I now fear is robbing and spring dwindling. Will you please instruct me on this point. I will furnish items for the BEE JOURNAL occasionally from this locality. JACOB OSWALT.
Maximo, O., Feb. 12, 1884.

If dysentery is among your bees, and the spring is cold and backward, you may be troubled with spring dwindling. To prevent this, you must begin the season before, and prevent dysentery during the winter.

To prevent robbing, keep the entrances closely contracted, and see that your bees are not allowed to get a taste of honey or other sweets, left about carelessly.

Bees in a Vault.

I commenced the season of 1883 with 29 colonies of bees in fair condition; increased by natural swarming to 61, and obtained 2,000 lbs. of comb honey in one and two-pound sections, and about 500 lbs. of extracted. Through queenlessness and other disasters they were reduced to 57 good colonies by fall, of which I put 54 in a cellar, especially prepared for that purpose, and left 3 out doors, 2 in chaff hives of my own pattern, in which bees have wintered well for the last three years, and one in a gum, which I bought last spring, and either had no time to take it out, or was too lazy to do so; I hardly know which is the truth in this case. The last named colony gave two large swarms, and good workers they are, although quite black. The young queen left in the stump, most assuredly mated with an Italian drone, for she produces yellow striped hybrids occasionally. The entrance to this gum is big enough to stick both fists in at once, and higher up than the highest space of the hollow inside. The other day, the temperature being 2° above freezing, I blew in, and the bees disturbed by my warm breath, began to hum. Now, is it not wonderful that these bees, with so big an opening and that almost at the top, to let out freely the warmth produced by the bees are (at least apparently) well. My cellar is a vault 14x36 feet, ventilated by subterranean 80 feet 6 inch tile. Up to the middle of January last, its temperature was not lower than 38° Fahr., but thenceforth it kept falling fast, and water flowed out of the entrance of most of the hives. When it reached 33°, I put a stove in it and warmed it to 55°. I now fire up every Saturday. They are dry now, but 4 of them show signs of dysentery by somewhat soiling their hives on the outside. If this warming up process, as above stated, is not the right or safe way for my bees, be kind enough to inform me of a better procedure. I have 20 colonies in hives 11x14, which I shall transfer to the regular Langstroth. They have all nice straight combs, which I will use in extracting. Will it not do to bore holes in the bottom-board and set it on a Langstroth brood-chamber? Will not the bees with the queen soon go down in that and leave this upper story free of brood? JOHN TRIMBERGER.
Cross Plains, Wis., Feb. 15, 1884.

You will remember I am one of those who believe that dysentery is the main cause of mortality among bees; further, that dysentery is not caused by cold, confinement or humidity. These things acting only as assistants or aggravations of the cause. Looked at in this light, it is not at all strange that your old gum, with all its upward ventilation, is in good order. It is impossible for me to tell, without being on the ground and closely observing, whether heating up the cellar makes matters better or worse. I have no idea that it will cure or stop the disease among the bees. We have seen dysentery in its worst form, in an exceedingly dry atmosphere.

Your plan for transferring the square hives is not practical. In most cases the queen will not retire to the lower chamber. Many times when we put an empty super over a common hive, the queen persists in staying above. Would it not be better to drive the queen with two-thirds of the bees from the box hive, and run them into the Langstroth, placing the box or square hive down by its side, wraping it with old carpet or something (covering it all up for a few days until the bees mark well their new location), and in about 21 days drive the rest of the bees out of the square hive clean, when the brood will all be out, and you can do what you please with the square combs and their honey? (See article on Modern Transferring, page 367 of this JOURNAL for 1883.)

☞ The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.
O. J. TERRELL, *Sec.*
North Ridgeville, O.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail. postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

☞ We have a few photographs (cabinet size) just taken, of the Rev. L. L. Langstroth, which we can send to those desiring them for 50 cts. each, postage prepaid.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ Do not let your numbers of the Bee Journal for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ "Dzierzon's Rational Bee-Keeping," bound in cloth, are now all gone. We have a large lot bound in paper covers, which we are sending to any one clubbed with the Weekly Bee Journal for a year, for $2.75. Any one who has paid for the Bee Journal for 1884, may send 75 cents more for the book, and we will send it by return mail, postage paid. It is an imported book, printed in the English language, and the price of the book is $1.50.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 25, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 15@21c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & Co.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—Same scarcity of choice white 2 lb. sections as reported last week, and a few thousand pounds would be readily taken at 17 to 18c. One pound sections in fair supply, and bring us more at present than 2 lbs. Dark comb very slow sale. Stocks are low on dark extracted, and in fair supply for white. Prices range 8@10c.

BEESWAX—None in this market.

There is some inquiry for white clover seed, for which in round lots, clean and pure, about $10.00 per bushel could be had. Send sample before shipping.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Market is quiet, and common qualities difficult to place at anything like satisfactory figures. Fancy qualities are scarce. White to extra white comb, 15@18c; dark to good, 9@11c; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

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HONEY—Plentiful and dull. Comb 12@16c, and strained and extracted 6@8c per lb. Top rates for fancy small packages.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

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HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.

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Local Convention Directory.

1884. *Time and place of Meeting.*

Mar. 4.—Meeting at Janesville, Wis.
Mack & Fatzinger, Com.

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

March 20.—Southern Indiana, at Madison, Ind.
H. C. White, Sec.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 9.—Lorain Co., at Elyria, O.
O. J. Terrell Sec., North Ridgeville, O.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

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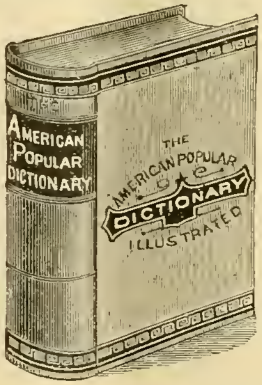
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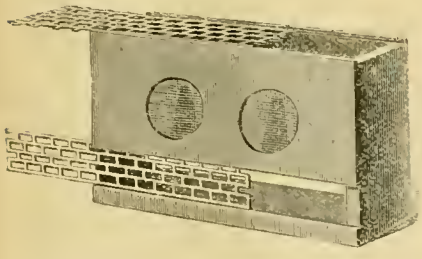

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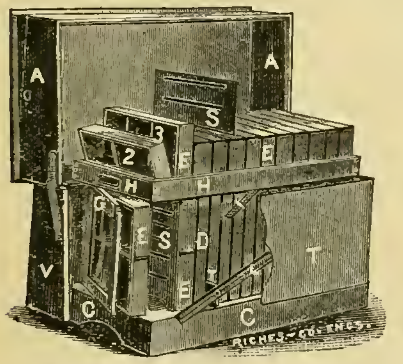

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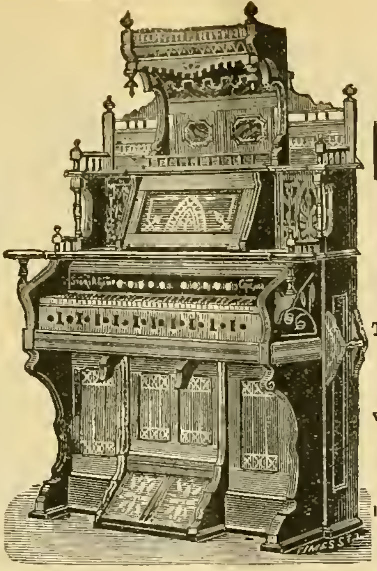

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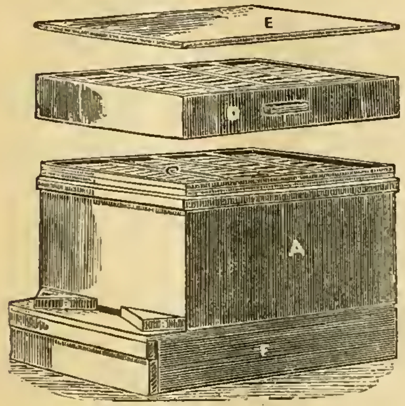

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X Subscribers whose papers reach them with this paragraph marked with a *blue* pencil, will please take notice that their *subscriptions will expire at the end of the present month.* Such are marked thus on the label, "Mar 84." We do not want to lose any of our subscribers, and give this notice so that all may get every number of the Bee Journal without any break, and no papers will be missed. When the money for renewal is received at this office, the date on the label is changed to correspond, and this change is your receipt. I there is any mistake made, notify us at once.

Advertisements.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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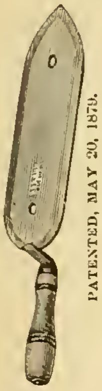
BINGHAM & HETHERINGTON
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The Original
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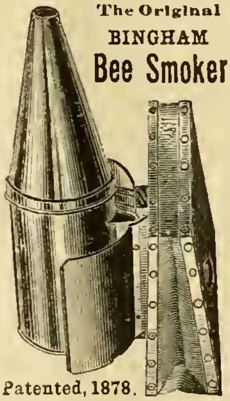
Patented, 1878.

Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

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Dzierzon's Rational Bee-Keeping.—A Translation of the Masterpiece of that most celebrated German authority, by H. Dieck and S. Stutterd, and edited, with notes, by Charles N. Abbott, *Ex-editor of the "British Bee Journal."* Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon....has probably made greater strides in scientific apiculture than any one man...For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, **$2.**

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. **Price, $1.00**

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means can afford to do without. Cloth, **$1.25**; paper cover, **$1.**

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.**, postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey; the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **5c.**; per dozen, **50c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price **35 c.** postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. **40** cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, **$2.50.**

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information Price **25c.** for either the English or German editions.

Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.25; for 200 colonies, $1.50.

Deutsche Buecher,

Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern—Schwärmen—Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., MARCH 5, 1884. No. 10.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

The Report of the National Society.

Concerning this matter, we have the following from Mr. McPherson, who has been mentioned before in connection with the matter. He says:

I see by late issues of the BEE JOURNAL that numerous correspondents have asked about the report of the Toronto Convention, and also Mr. Root's and Dr. Miller's replies. Perhaps an explanation from myself would not come amiss, but first I must thank Dr. Miller for his kind words, and assure him that I shall endeavor to sustain his impressions regarding myself. Representing the *World* of this place, I caused arrangements to be made with one of Toronto's best reporters, to have him report the meeting, for the benefit of the *World* alone, and at a set figure. I had supposed there would have been other reporters there representing other papers, and that the regular minutes would be taken by the secretary. I did not imagine that my reporter was to take the *official report* of the meeting, nor was I aware that he had been doing so until after the convention was over.

During the second day (I think) my reporter came to me and said that at the rate they were going, it would be be worth more than I was paying. Not supposing for a moment that he would "go back" on the arrangement first made, the matter stood, and he finished reporting the meeting. The next day Mr. Jones informed me that a resolution had been passed to have the report published and a copy sent to each member, and *then* I learned that mine was the official report. I called at the office of the reporter to learn how long he would be in furnishing the report transcribed, and was told that the job would be worth $100—four times the amount of the first arrangement.

I consulted Mr. Jones, and he called twice to see what he could do. I threatened legal proceedings. The reporter had the matter in his own hands, however, and knew that he held the official report, and, I suppose, thought we could not get along without it. After a good deal of war-like correspondence, I determined, rather than pay a premium for such unbusiness-like conduct, to let him have the labor he had been at, for his pay. Thus the matter stands. I did not think that it was going to pay me to expend $100 for the manuscript (nearly $1.00 per member) and then put it into shape, print and bind the reports and get, perhaps, 25 cents each for my trouble. Besides, I did not wish to encourage that style of doing business. I will endeavor to get the names of the vice-presidents of each State for the association. Kindly excuse my having taken up so much of your space.

Yours very truly,
F. H. McPHERSON.
Beeton, Ont., Feb. 22, 1884.

Dr. Miller sends us the following in explanation of his connection with the affair:

In reply to Dr. Besse's inquiry, I can only repeat what has been already stated in the BEE JOURNAL (which Mr. Besse had probably not yet seen when he made the inquiry), that, by vote of the society, the publication of the minutes of the North American Bee-Keepers' Society was left in the hands of the old officers, so that the present secretary has nothing to do with it more than any other member of the society. C. C. MILLER.
Marengo, Ill., Feb. 26, 1884.

A series of "blunders" seem to have made this whole matter very unsatisfactory to all concerned. As it is pretty certain now that there will be no official report, it is quite useless to further agitate the matter. If the list of vice-presidents can be obtained, it may help some, and save that much from the wreck. The "Report" is too stale now to be of much value, and may not be worth the $100, but bee-keepers generally will think that, even it had cost that sum, it should have been promptly published, as ordered by the Society. There were funds enough in the Treasury, and these should have been used to carry out the wishes of the members, as expressed by vote at the meeting, both as regards publishing the official report and procuring the badges.

However, let the matter rest until the next meeting, and then we hope that the officers will strictly attend to *business*, and not be led astray with "emotional excitement." The National Society should, in its methodical management, be a pattern to all other societies; but we fear that, so far as the last annual meeting is concerned, it will be hardly so considered by any thoughtful or systematic person.

The Convention at Davenport, Iowa.

As announced previously, we attended this meeting, and found quite a number of the bee-keepers of Iowa and Illinois present. We have a portion of the proceeeings ready for publication, but our columns are too much crowded this week to admit them. While there, we were the guest of the Rev. and Mrs. M. L. Williston and family. Mr. W. is the pastor of the Congregational Church at Davenport, is a reader of the BEE JOURNAL, and is very much interested in bee-culture. Col. McCagg, the president of the society, is a thoroughly wide-awake and progressive bee-keeper and horticulturist, under whose guidance the society has grown from 2 or 3 to over 50 members, representing 70,000 lbs. of honey production; among whom are the Rev. O. Clute, Rev. E. L. Briggs, J. V. Caldwell, J. B. Lindle, C. H. Dibbern, Capt. L. H. Scudder, and many others whose names are familiar to our readers, as will be seen when the Report is published—probably next week.

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

E. L. Goold, Btantford, Ont.—44 pages—Bee-Keepers' Supplies.

H. H. Brown, Light Street, Pa.—20 pages—Bees and Apiarian Supplies.

O. Clute, Iowa City, Iowa—2 pages—Italian Bees and Queens, and Class ot Students.

J. P. McGregor, Freeland, Mich.—1 page—Hives and Sections.

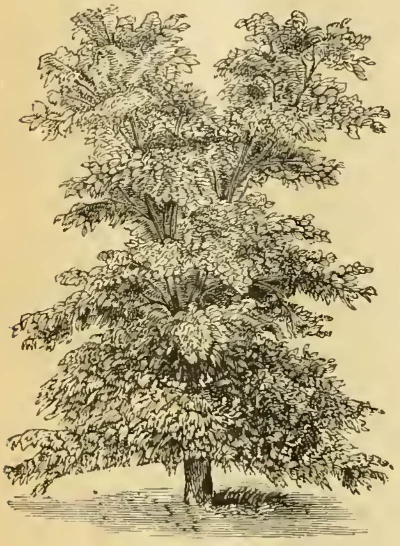
Hillside Fruit Farm, Palmyra, N. Y.—2 pages—Plants.

Honey Locusts.

Mr. R. Codd, of Canada, asks about Honey Locusts for honey production, and wants to know if they will prosper as far north as the Dominion, etc.

Perhaps the best way to reply to the query about its adaptability to Canada, will be to quote from a letter from the Hon. L. Wallbridge, then of Belleville, Ont., but now Chief Justice of Manitoba. He says:

"Another tree of great value to the bee-keeper is the honey locust. This tree comes in bloom quite early, and is valuable on this account. The bees visit it almost in swarms, and the honey and pollen then brought in gets up the excitement in the hive, and breeding goes on at a rapid pace. Now this is the very thing bee-keepers want. They want strong colonies ready to gather honey when white clover comes in, and I know of no tree or plant which does so much to strengthen the colony early as this locust tree."



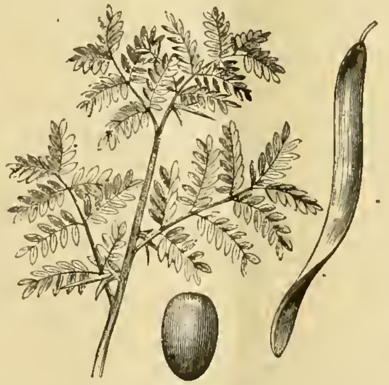
Honey Locust Tree.

The New York *Tribune* says that in the Northern sections of the United States, where the Osage orange is more or less injured by the winter, the honey locust is undoubtedly the most valuable plant for hedging purposes. There is no special culture necessary for it, more than is required for other species, but it needs attention for the first 2 or 3 years to form a thick base. The young hedge should be frequently cultivated and kept clear of grass and weeds all summer, otherwise mice will harbor therein and bark the young plants. In trimming, cut well back for the first 2 or 3 years, bearing in mind there is no difficulty in quickly obtaining the desired height, but it is far more troublesome to induce it to become dense and twiggy.

The best results are obtained from running one strand, or, better still, two strands of barbed wire along the middle of the hedge, thus preventing the inroads of unruly animals, and that bane of the honest orchardist, boys with thieving propensities. To start at the commencement, honey locust seeds should be collected in the pods as they fall from the trees in autumn, and placed in a cold exposed position until hard freezing weather, when they can readily be threshed like beans. After cleaning the seeds from the fragments of pods, etc., place in bags and preserve dry until spring. At planting time soak the seeds in warm water until they show signs of germination, when they should be sown in drills like peas, in good, thoroughly pulverized soil. Like the larger portion of our native trees, this species forms more root than top the first year, consequently one-year seedlings are usually rather small for planting in the hedge-row, but they should not be left to remain longer than 2 years, else they will be on the other extreme. The cause of so many poor hedges, however, is neglect in cultivation, and the honey locust of all others will not thrive without care and attention.

The Nebraska *Farmer* gives the following valuable instructions regarding the planting and treatment of honey locust for hedges:

The secret in hedge-growing of any kind, is well-directed care and attention during the first 3 or 4 years, and if this be given to honey locust it will make a hedge every time. The plants must be good ones, vigorous and thrifty—and should be about the same size together, and not plant small and large ones promiscuously. Before setting, make the ground along the line rich and mellow. After setting out the row must be cultivated and kept clean until the hedge is matured or finished. Let the plants grow the first year undisturbed, and then cut them down within 3 inches of the ground; the second year, 7 inches from the ground; third year, 12 inches; fourth year, 25 inches; sixth year, 33 inches; and the seventh year, height desired for fence. This takes seven years, but the fence is good after the fourth year.



Honey Locust Limb—pod and seed.

In view of the increasing destruction of our forests, and the great cost of fencing material, any substitute for good fences will be eagerly sought after by the thoughtful farmer. Osage orange has been extensively tried and experimented with, but it fails to fill the bill, there being many very objectionable features about it, chief among which are its inability to stand excessive cold winters; but the honey locust is free from this objection. As an attractive hedging nothing can excel it in appearance, and certainly nothing is easier of cultivation. When allowed to grow in tree-form it becomes a beautiful shade tree, and the timber is among the most valuable. For honey-producing it stands among the best, and bee-keepers will do well to alternate the honey locust with linden and tulip tree or poplar, as it comes into bloom before the linden, and is a more certain producer, though not so bountiful. Bee-keepers should liberally ornament their grounds with it, and try its virtues for hedging. The seeds or plants can generally be obtained of nurserymen.

Local Convention Directory.

1884. *Time and place of Meeting.*

March 5.—N. E. Michigan, at Lapeer, Mich.
W. Z. Hutchinson, Sec., Rogersville, Mich.

March 20.—Southern Indiana, at Madison, Ind.
H. C. White, Sec.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 9.—Lorain Co., at Elyria, O.
O. J. Terrell Sec., North Ridgeville, O.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

☞ The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.

CORRESPONDENCE

For the American Bee Journal.

Priority of Location.

J. E. POND, JR.

What a delightful thing would it be to some poor fellow, who owns a few square rods of land, if he could only have the right of priority, to all the honey secreted on the thousands of acres surrounding him. What a most delicious monopoly would be at once created. All that needs to be done, if I "catch on" to the idea, of at least one apicultural writer to give such an one a moral right at least to control all the honey flora within bee range of his apiary, is simply to be the first one in a given locality to own a colony of bees.

To be sure some one else might object, but no matter for that, he is the first comer, and the honey yield is his by virtue of priority. When he has procured one hive, and by the exercise of good judgment has selected a rich location, and found that the business will pay a satisfactory profit, the law "of advantage in speciality" imbues his mind with a desire at once to enlarge his apiary till he has completely covered his diminutive tract of land with hives, as thickly as it is safe to stand them. As the season rolls on and he finds each colony giving large returns, he views his spoils by a large degree of self-complacency, and says to himself, "I've got a perfect bonanza." Ere long his neighbor, who owns the adjacent territory, ascertains that there is money to be made in keeping bees, and procures a few colonies himself, thinking in the innocence of his heart, that as the flowers are his, he has at least the right to gather a portion of the nectar from them; but he is rudely awakened to the fact that he has no such right (morally at least), because no one has the right by reason of priority to all the honey yielded within an area of five or six miles from the apiary he has established. No. 1 comes over to see No. 2 and says to him, "My dear sir, why do you keep bees and thus spoil my chance of getting rich in the business? Last season I got 200 pounds of honey per colony; this season I shall not average 100 pounds, and all because you are poaching on my manor."

But, says No. 2, "I own all the surrounding territory, and you own scarcely land enough on which to set your hives, why have I not a right to gather nectar from my own flowers?"

"Why, my dear sir," says No. 1, "don't you know that my right of priority (morally at least) prevents you from having any rights to the honey, that I am bound to respect?" And so the conversation goes on, but whether No. 2 is fully satisfied or not remains to be seen.

Is there any sense in a discussion of this kind, and will the persons who advocate any such doctrine (if any such there are) honestly claim that any right of priority such as indicated above, in reality exists.

I am surprised at times to see the amount of selfishness that is shown by some of our able writers, when the question of honey yields is under consideration, and think of the difference in this regard that exists between our bee-keepers and those across the water. Here the idea seems solely to work for self, and to prevent every one else from engaging in the business; there societies are being formed whose sole object is to teach the best methods to the poorer classes, in order that they may have to add a small revenue from their bees to the stipend they receive for their daily labor. Here the attempt is being made to discourage making bee-culture an auxillary to other pursuits; there the attempt is being made to urge every one who possibly can, t occupy his leisure moments wit labor in his own apiary.

One day we hear the cry of "overstocking," and the claim made that ere long bees will be so thick that they will starve unless sugar syrup is supplied them for food. The next day, farmers and professional men are "pitched into" with great severity, and they are accused of taking the bread out of the poor specialist's mouth. Then the agricultural colleges are "hauled over the coals" for adding bee-culture to their curriculum, and advertisements for students are issued in the same paper by bee-keeping specialists.

Do these college students and professional men injure apiculture as a science or not? Who, I ask, have been the leaders in apicultural improvements? Has it been the specialists whose time is wholly devoted to caring for their crops of honey or the rearing of queens, or has it been the professional men, who have had the time and the desire to experiment in order to determine the value of this or that point, or the best ways and means of procuring comb or extracted honey? Who was it that invented and introduced the movable frame? Mr. Quinby, one of the ablest and most practical bee-keepers of the age, might have done this had he the time to devote to it, but he did not, and the Rev. L. L. Langstroth, one of these same professional men, did have the time and the inclination, and he did it. Who discovered and taught us the theory of parthenogenesis? Dzierzon, another professional man. And so I might go on, but the above examples are sufficient for the point I wish to present. I trust then, in the future, if selfishness does exist among our apiarists, that (if they must exercise it) they will do so in some less harmful manner than in attempting to drive those away from our ranks who really desire to enter them.

Foxboro, Mass.

☞ The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.

O. J. TERRELL, *Sec.*

North Ridgeville, O.

For the American Bee Journal.

Statistics of the Honey Crop.

WM. MUTH-RASMUSSEN.

Under the above heading Dr. C. C. Miller asks for suggestions on the best plan for collecting the statistics. I will give the plan, which, to my mind, seems the only feasible one. It should be done through county associations. In the first place the committee on statistics should get printed a number of postal card blanks, giving the questions desired to be answered, and also a like number of cards, reading about as follows:

(Date.)........

Dear Sir:

You are hereby requested to call a special meeting of your county bee-keepers' association on or about the ....day of...., if no regular meeting occurs at or shortly previous to that date, for the purpose of collecting statistics for the North American Bee-Keepers' Society, as indicated in the accompanying blank, obtaining from the members present as much as possible information about those not present, and about other bee-keepers in your county, who are not members of your association, also estimating as near as you can such items as you cannot learn definitely; and to forward said blank, properly filled out, to the Vice-President of your State, as soon as possible.

If there is no bee-keepers' association in your county, you are respectfully requested to collect as full as possible statistics with which to fill out the blank, or, if unable to do so personally, to hand these papers to some other bee-keeper in your county, who may be willing to aid the committee in this important work.

The State reports are desired to be in the hands of the committee by the ....of....

Committee on statistics, N. A. B. K. S.
............Chairman.
........Vice-President for........
Address............

As many blanks and cards as there are counties in each State or Territory should be forwarded to the respective vice-presidents, also a corresponding number of stamped envelopes, and one stamped and printed envelope, bearing the name and address of the chairman of the committee.

As soon as this outfit is received, the vice-president should forward a blank postal card, addressed to himself, and one of the accompanying cards filled out, signed and addressed in the proper places, both enclosed in one of the stamped envelopes to each secretary, and to any other bee-keeper designed for the work.

On return of the postal cards the vice-president will make out a State report and send it, in the printed envelope, to the chairman of the committee, keeping the county reports filed away for future reference. In each county where there is no association, the vice-president can probably find some enterprising bee-keeper who will take interest enough in the matter to collect tolerably accurate statistics; at any rate the number of colonies can be learned from the assessor. If not otherwise obtainable, the vice-president may send a self-addressed postal card to the post-master at each county-seat, requesting him to return it with the name and address of the most prominent bee-keeper in his county.

Thus the principal expense for printing and postage will fall upon the National Society, in whose behalf the work is to be done. If any of the outfit is not used up, it can be kept for next year's report, and turned over to the vice-president's successor.

In regard to the failure in obtaining statistics, I will say that I have taken long trips on horseback through the country spending days in going in different directions in order to visit the bee-keepers at their homes, and obtain statistics from their own mouths. I did it at a time when I had leisure, but should not care to repeat the trips every year, and others probably feel the same way. At other times I have sent self-addressed postal card blanks to 20 or 30 bee-keepers, needing only a few plain figures which might be jotted down with a lead pencil right in the post-office, and the card dropped without taking it home at all; and I had the satisfaction (?) of having at most half a dozen returned. The fault lies partly in the apathy of the multitude, each one thinking there will be enough without his individual report, or forgetting, or not caring at all about the matter; partly in putting too much work and expense on a few, however willing they may be to help.

Independence, Cal.

For the American Bee Journal.

A Bit of Bee Surgery.

DANIEL WHITMER.

Last September, in looking over a number of nuclei to ascertain whether the queens had met the drones, I discovered they carried the drone appendage. In three or four days I again opened the hives to know whether they were laying, and found that all were depositing eggs very nicely and accurately but one, and she still retained the drone appendage. I closed the hive until the following day, when it was opened again and the queen examined, and found to be in the same condition as before.

She was a very fine-looking queen, and an exact duplicate of her mother, whose Royal Highness I very much admired, she being a queen purchased of Dr. Wilson, of Iowa, and as I desired to save the daughter, I concluded to examine the queen two successive days, and, if the drone organ was not yet voided, I would perform a surgical operation, and extract it from the queen.

The colony was again disturbed, and the queen found to be in the same condition. Two days later, the organ was very hard and dry, adhering very closely to the orifice of the queen. I captured her, took her to the house and inside of the screen door, by the aid of my better half, the organ was extracted with difficulty, with a needle, and the queen was returned to the hive uninjured; the next day, to satisfy my curiosity, I again opened the hive to ascertain the true condition of my patient, and she was found depositing eggs symetrically. Thus I saved the life of good queen, which otherwise would have been lost. I lost one, once before, by letting her alone. I do not know whether any one else ever tried the experiment or not, but it can be successfully done. My 147 colonies of bees are all right as yet, save one which was queenless.

South Bend, Ind., Feb. 21, 1884.

For the American Bee Journal.

Clipping Queens' Wings.

GEO. E. BOGGS.

Mr. W. H. Stewart, in a recent article on the above subject, requests bee-keepers to answer certain questions.

Mr. S.'s argument proves entirely too much, for if any appreciable exercise of the queen's wings were requisite to not simply increase but even perpetuate wing power in the workers, nature's plan would long since have proved abortive, and the honey-bee would ere this have become extinct. If you contrast the few hours' use of the wings of a queen during her long life, with the constant use of the wings of a worker during the greater portion of its short life, they bear no proportion whatever. In comparison, it may be said the queen does not use her wings.

Mr. S.'s argument not only proves too much, but reaches the *reductio ad absurdum* when he proposes to take his queens out of the hives and toss them into the air, and compel them to use their wings more than nature designed. In this he would contend against nature, and would not simply waste his time, but inevitably do harm. All the energies of the queen seem to be concentrated in her reproductive organs. If we carefully consider the great strain put on them, we will not hastily divert them into other channels. If we do so to any appreciable extent, we will have a deterioration not only of the wings but of all the members of the workers.

Let Mr. S. apply his argument to the mandibles, the tongue and the thighs of the queen, and he would have us believe that we are in great danger of soon having workers that will not be able or inclined to make comb or gather honey and pollen.

I am a firm believer in the laws of heredity. I do not understand how laws that we consider established in regard to animal life are apparently violated in the economy of the bee, but it only shows that the Creator is not limited in his methods of working.

As a further illustration, take another fact regarding queen-bees. How strange that the stimulating food which shortens the period of arriving at maturity should lengthen life. It seems to be an established law in animal life that the length of life is in proportion to the period of time during which maturity is attained. With the bee it is entirely different. The queen is born five days earlier, and begins her life work ten days earlier than the worker, and yet the queen lives to be about three years old, whilst a worker, if actively at work, hardly lives sixty days.

Columbia, South Canada.

N. E. Ohio & N. W. Pa. Convention.

This association held its fifth annual convention at Jefferson, O., on Jan. 16 and 17.

The meeting was called to order at 1 p. m. Pres. E. F. Mason being absent, C. T. Leonard, of Andover, was called to the chair, and the usual annual address had to be dispersed with. A large number of bee-keepers was present, 6 counties in Ohio and Pennsylvania being represented.

After routine business, the reports of standing committees, etc., the members opened the discussion upon the question, whether modern bee-culture is a success financially.

H. W. Hacket believes it is a paying business, if rightly managed. He makes his hives in winter, and gets everything ready before the busy season comes, so he is enabled to give his whole attention to the bees just when they need it. He has a time for every part of his work, and everything is done in time, as time tide and bees wait for no man.

D. Videto said that most of the bee-keepers present were farmers like himself, and can fairly estimate profits from this branch of industry only by comparing them with the profits arising from other departments of labor. The speaker compared the amount of money and labor invested in the production of an acre of wheat and other farm crops, with an equal investment in bees, and made a very favorable case for the latter. It is easy enough by division to increase one colony to ten, but among experienced apiculturists, the real question of interest has been to keep all the bees in a hive, and make them spend their strength in the production of honey. If a man really desires to increase the number of his colonies, they will multiply as fast or faster than is good for them, without any help.

The questiun of keeping bees in connection with other business, drew out some discussion, the general opinion being that it is not advisable to have any other occupation on hand, that will require your attention at any time when the bees need it.

M. E. Mason said a man who takes care of 75 or 100 colonies, making his own hives and foundation, and marketing his honey, will have done a good year's work, and will have no time to devote to any other business.

"The best method of increasing colonies," was passed with but little being said, as most old bee-keepers appeared to think that bees would increase fast enough without any "best method," and that he who could successfully prevent increase, would produce the most honey, and consequently the most dollars.

The evening session was opened by an address by Mr. Videto, on bee-keeping in general. He talked for over an hour in his usual easy and happy style, and was listened to with marked interest.

At the close of Mr. Videto's address, the President called Capt. S. H. Cook to the stand, who, with a few appropriate remarks in behalf of the Association, presented to Mr. V. a beautiful ebony cane with a solid silver head, on which was engraved, "Presented to D. Videto, by the N. E. Ohio, and N. W. Pa. Bee-Keepers' Association."

M. E. Mason had spent much time in making experiments, and had given swarming more study than any subject connected with apiculture. The object in keeping bees is to get money, and honey is the chief reliance for obtaining the desired reward. If bees are permitted to exhaust their strength in swarming, hives and foundation are needed, which cost more money than is received. We must have bees in the hive; we must keep our colonies strong, or the business will be unsatisfactory.

He practiced the following plan to prevent increase last season. He worked 20 colonies in this manner, and is satisfied they gave him 1,000 lbs. more honey than if he had allowed them to swarm, and hived them in the usual way. He hives the first swarm that comes out in the usual way, and for convenience, he will call the hive that this swarm issued from, No. 1; the next swarm, and the hive they issue from, No. 2, etc. When swarm No. 2 comes out, he takes 2 frames of brood from hive No. 1, and puts empty combs or foundation in their place, and destroys all queen cells on the remaining combs, and then hives swarm No. 2 in this hive, No. 1, and gives them a case of empty sections. When No. 3 swarms, hive No. 2 is prepared in like manner to receive them, and thus he continued till the 20 colonies had swarmed, and had only increased one.

Mr. McGonnell said he prevented swarming in an apiary of a hundred colonies by cutting out drone brood and giving plenty of room. He had an increase of only 7 colonies from 100, and that was caused through neglect.

Statistics taken from the members showed 1,069 colonies put into winter quarters in the fall of 1882; 896 of them lived through the winter and spring, and increased to 1,656 colonies in the fall of 1883, and produced 22,388 lbs. of comb honey, 9,755 lbs. of extracted honey, and 140 lbs. of wax. About 75 per cent. of them were packed in chaff or other dry material, or in chaff hives on the summer stands; 10 per cent. were put in cellars, and the rest were without any extra protection. Of those packed in chaff, etc., and in chaff hives, about 16 per cent. were lost during the winter and spring; 22 per cent. of those in cellars died, while 36 per cent. of those without any protection died.

The next annual meeting of the society will be held in Erie, Pa., the second Wednesday and Thursday in January, 1885.

At the election of officers, P. T. Twitchel was made President, C. H. Coon, Secretary, and N. T. Phelps, Treasurer. Vice Presidents: M. E. Mason, D. Videto, W. S. Stinson, J. McGonnell, S. B. Wheeler, J. P. Sterrett, H. W. Hacket, J. Hatton, F. M. Blanchard, C. L. Payne, H. A. Eastman, G. S. Harvey, B. F. Jenkins, J. S. Barb, H. B. Hammon, H. F. Sager, E. B. Case.

The Association is in a flourishing condition, and this meeting was a success in every sense of the word.

C. H. COON, *Sec.*

New Lyme, Ohio.

For the American Bee Journal.

Why Abuse Half-Pound Sections?

W. Z. HUTCHINSON.

Ever since half-pound sections were invented they have been subjected to a running fire of abuse. Everything that could be thought of has been said against them. Supply dealers have been accused of "booming" them from selfish motives. Bee-keepers who did not understand the principles underlying the production of comb honey, have written long articles in which they attempted to prove that not nearly so much honey could be secured in small as in large sections. Bee-keepers have been accused of being too progressive, too restless, with not being satisfied in "letting well enough alone," of creating a demand among consumers for something that they would never have thought of asking for if it had not been brought to their notice, thus compelling bee-keepers, who did not wish to do so, to use small sections or be left behind, when, if all bee-keepers would only place the seal of condemnation upon the "one bite" sections, they would be saved this trouble.

It has also been mentioned that more sections and more foundation would be needed, but why repeat all that has been said against half-pound sections. Of course all that has been said has not been abuse, but many of the arguments brought against them have been so exceedingly transparent that it required not a very penetrating vision to see beneath them an inducement that flowed about as follows: "I am very much afraid that somebody is going to get the start of me."

At our late Michigan State Convention the subject was but lightly touched upon, and when one dealer reported that he could get no more for them than for the pound sections, and another man reported that a certain dealer could find no sale for them, it was certainly interesting to witness the satisfaction that beamed upon many faces, and to listen to such exclamations of delight as, "Good," "I'm glad of it," and "That's all right;" in fact, the convention came just about as near applauding and cheering as it did when Mr. D. A. Jones told how many thousands of five cent packages of extracted honey were sold at one Canadian fair. As Mr. Jones went on and explained how the sale of these small packages led to the sale of larger ones, and so on and so forth, some of the members were fairly enraptured; they could see the beauties of selling small packages of extracted honey; but half-pound sections—Oh! that was a horse of a different color.

Perhaps extracted honey can be put up for sale in small packages more cheaply than the same thing can be done with comb honey, but if the public is willing to pay for the expense, why this feeling and prejudice against half-pound sections? One bee-keeper said to me: "It just makes me mad to hear folks even talk about half-pound sections," and, in saying this, I fear that he expressed the sentiments of quite a number of bee-keepers.

Now, I have no interest in half-pound sections; have never used them, and do not know as I ever shall, but it makes me "mad" to see people so unreasonably abuse them without even trying them; and that, too, in the face of the fact that some of our leading comb honey producers have demonstrated that, with proper appliances and methods, just as much honey can be obtained when using half-pound as when using pound sections; and the only question is whether enough larger pieces can be obtained to pay for the extra manipulations.

Arguments against half-pound sections, or anything else for that matter, can be listened to with pleasure, but simple abuse and unreasonable prejudice are disgusting.

Rogersville, Mich.

For the American Bee Journal.

Cedar Valley, Iowa, Convention.

The bee-keepers of Cedar Valley, Iowa, met at Waterloo, Feb. 13 and 14, at the office of J. Moshen; organized by electing C. P. Hunt President, and John Bird Secretary *pro tem.* It was moved by O. O. Poppleton that a committee of three be appointed to draft a constitution and by-laws. O. O. Poppleton, H. O. McElhany, and D. W. Thayer were appointed as the committee. They submitted the usual printed constitution and by-laws with the following amendments:

SEC. 2. Strike out all after the word interests, and the following inserted in its place: Shall discuss such questions as have a practical bearing on bee-keeping.

SEC. 8 was all struck out, and the following adopted instead: No member shall be entitled to the floor longer than 5 minutes in discussion of any question without the consent of the society.

SEC. 11. In the by-laws was changed by striking out from the word office, all the balance of article.

On vote of the convention, the constitution and by-laws as amended were adopted.

On motion it was moved that the President *pro tem* appoint a committee of three to nominate permanent officers. H. O. McElhany, D. W. Thayer, and Geo. Beck were appointed, and the following names were submitted: C. P. Hunt, of Waterloo, for President, and Dr. Jesse Oren, of La

Porte, for Vice-President, and O. O. Poppleton as Secretary and Treasurer.

All the above officers were duly elected except O. O. Poppleton, who objected to serve on account of failing eye sight. H. O. McElhany was elected in his place.

The following persons became members:

H. O. McElhany,	Brandon,	Iowa.
O. O. Poppleton,	Williamstown,	“
D. W. Thayer,	Vinton,	“
J. F. Spalding,	Charles City,	“
Geo. Beck,	Waterloo,	“
James Ralston,	Vinton,	“
A. D. Bennett,	Janesville,	“
John Brusk,	Waterloo,	“
D. W. Jolls,	“	“
J. I. Carr,	“	“
C. P. Hunt,	“	“
John M. Bennett,	“	“
H. Van Buren,	“	“
J. Moshen,	“	“
I. Hood,	“	“
O. Hayden,	“	“
J. F. Messenger,	“	“
D. M. Diedorff,	“	“
L. L. Triem,	La Porte,	“
H. E. Hubbard,	“	“
Dr. Jesse Oren,	“	“
Thos. Tracy,	Nashua,	“
John Bird,	Bradford,	“
E. E. Starks,	Cedar Falls,	“
A. J. Norris,	“	“
E. E. Newton,	“	“
Samuel Aungst,	Vinton,	“
J. K. Oren,	Brandon,	“

On motion of O. O. Poppleton, the order of discussions should be in the form of written questions handed in by the members to the President and read by him in rotation.

The first question for discussion was: “The most desirable width for sections.” It was decided that 1½ to 1¾ inches are the most desirable.

“What shall we do with our second swarms?” Mr. Spaulding prefers to prevent them from issuing.

Mr. Bennett, Jr. would let them issue and take out all the queen-cells for future use, and return the swarms to the old hive with a laying queen.

“Is it expedient to clip queen's wings?” Several of the members thought it would. L. L. Triem had experienced some loss of some of the most valuable queens he had by the practice. O. O. Poppleton's experience was the reverse from this, which brought out considerable of a discussion both *pro* and *con*. Messrs. Spaulding, Bennett and others were not in favor of the practice.

“Best way to hive swarms.” By placing the hive where it is to permanently stand, and carry the bees to it.

“Which kind of honey to produce, extracted or comb?” Messrs. Tracy, Spaulding, Bennett and Triem would raise comb honey. Messrs. Poppleton, McElhany and Morris preferred to produce extracted honey on account of selling out to the wholesale dealers, and the safety of shipping in large packages.

During the discussion of this question, the President asked what extracted honey could be produced at, to be made profitable? Those producing extracted honey thought they could afford to raise honey in this way at from 8 to 10 cents per pound, wholesale. Mr. Bennett, Jr. thinks bees will winter better run for comb honey. Mr. Poppleton thought they would not. Considerable discussion ensued.

“What shall we do with surplus bees?” A. Bennett never has more than he wants. Mr. Spaulding kills all the inferior ones, and keeps the best. Mr. Poppleton does the same. Mr. J. M. Bennett would advise uniting all the light colonies in the fall.

Adjourned till 7 p. m.

Called to order at 7 p. m., and the first question discussed was, “Which is the most desirable method of wintering—cellar or out-of-doors?” It was decided by the majority of the members that the cellar, with proper conditions, was preferable. O. O. Poppleton gave his method of outdoor packing; he uses double-walled hives, packed with timothy chaff, and has success.

Question, “Does it take more honey in the cellar than it does for out-of-doors?” Answered, “Out-of-doors, always.”

“Wintering in deep vs. shallow frames.” Messrs. Tracy, Poppleton and Hunt were in favor of the deep frames. Messrs. McElhany, Bennett, Sr., Bennett, Jr., and Triem favored shallow frames.

“Is shade essential for bees; if so, what kind, artificial or natural?” Decided by all that it was, and the natural was the most practical.

“Should hives be raised from the ground?” Yes; from 3 to 4 inches, at the back, and 1 to 2 in front.

“The most desirable size of sections for all purposes.” Messrs. Spaulding, Triem, Oren and McElhany preferred one-pound sections. Messrs. Tracy, Bennett, Jr., and Hunt used Harbison frames.

Adjourned till 9 a. m.

Called to order at 9 a. m., Feb. 14, and the first business was the selection of the time for the annual meeting; the first Wednesday and Thursday in October, 1884, was designated, and Waterloo was the place chosen.

“Can more than one yard be run successfully?” Mr. Spaulding was the only one present who had worked in this way, and was successful.

“How many bees can be kept in one locality without overstocking a location?” Mr. Triem thought that almost any number could be kept and not be overstocked. Mr. Tracy thought from 1 to 300 colonies, according to the season, with success.

“Best spring management for bees?” Mr. Bennett, Jr. would commence the management as soon as the bees were placed on the summer stands. Bees should have plenty of honey, and he would spread the brood gradually as the weather warms up; encourage the queens to fill the frames with brood as fast as possible, by giving them frames of honey or syrup, and place them in the centre of the brood-nest. Mr. Bird left the packing around the hives until late in the season.

“The best bees for general use.” Some thought hybrids were, but the majority preferred pure Italians.

“What is the standard of purity, for Italians?” Three distinct yellow bands for the workers.

“At what age should a queen be superseded?” Mr. Stark said, when she showed signs of failing. Mr. McElhany would kill all the queens at the age of two years, when running for extracted honey.

“Best foundation for general use.” Most of the members said the Given, about 6 to 7 square feet to the pound.

“How to prevent natural swarming?” Give the bees plenty of room in raising comb honey. Those running for extracted honey are not bothered with this.

“Are any here troubled with foul brood?” None.

“Is a portico an advantage to a hive?” The members were about equally divided on this subject.

A vote of thanks was given D. W. Thayer for procuring reduced rates over the different railways; also to the B. C. R. & N. Ry., C. N. W. Ry., and I. C. Ry., for such reduction; also to J. Moshen and the city of Waterloo for the use of rooms occupied by the convention; also to the Logan House for reduced rates.

Adjourned.

H. O. McElhany, *Sec.*
C. P. Hunt, *Pres.*

For the American Bee Journal.

Home Market for Honey.

D. WHITE.

There are some who have no trouble in disposing of all the honey they can produce; but many cannot sell their honey, especially extracted. When I produced only from 700 to 1,000 lbs. of honey, I could scarcely find enough customers to consume it; but now, with but little exertion, I can dispose of all the honey I can produce, which was 8,000 lbs. in 1882, and 21,000 lbs. in 1883. This was nearly all extracted honey, and nearly all taken at my door by customers, who came with crocks, pails, jugs, and large milk cans in which to carry it away. They come every season in the same way, for I have never sold them honey that will get thin and sour, if kept in damp cellars; nor have I ever sold them honey that was extracted and ripened after extracting (as some tell about). I never allow a pound to be taken away that was not first-class in every respect. We are careful not to put a pound of comb honey on the market unless it is perfect, so far as ripeness and being sealed up is concerned; we will not offer honey with the top-half of comb sealed and the rest unsealed; it shows for itself, deception cannot be practiced with comb honey. When a comb is extracted, like the section I have described, it is trying to deceive the customer who buys such honey, and I admit he is deceived, but in most cases not more than once or twice, for a large majority of customers will say: “It makes my throat smart. I do not like it, and will not buy any more.” Some will say it is adulterated. Now such work as this is uncalled for, and I believe any one can build up an immense home trade for extracted honey. All that is required is to have as good an article *out* of the comb as is sold *in* the comb. My price for extracted has always been 9 lbs. for a dollar, or 10 cts. a lb. for 50 lbs. or more.

I have 140 colonies on the summer stands, all in chaff hives, except 12 in simplicity hives. They have had several good flights, and all answered to roll call. I never saw them in better condition in chaff hives. I shall lose 2 or 3 out of those in single-walled hives. Reports are coming in from farmers around here, that they are losing their bees with hives full of honey.

New London, O.

☞ We will organize a bee-keepers' association at the Court House in Franklin, Ind., at 10 a. m., April 5, 1884. All bee-keepers are invited to attend and take part in the organization. L. R. JACKSON.

Urmeyville, Ind., Feb. 26, 1884.

☞ The annual meeting of the New Jersey and Eastern Bee-Keepers' Association, for the election of officers and other business, will be held in the city of New York at Room 24, Cooper Union, beginning Wednesday, March 12, at 10 a. m., and continuing two days. J. HASBROUCK, *Sec.*

☞ We have received a pamphlet of 118 pages, entitled "Tea and Coffee: Their Physical, Intellectual, and Moral Effects on the Human System," by Dr. A. Alcott, with notes and additions by Nelson. Price 25 cents. Fowler & Wells Publishers, 753 Broadway, New York.

SELECTIONS FROM OUR LETTER BOX

Bees Confined 102 Days.

My bees have been in the cellar 102 days. The temperature was never below 43° or above 45° after they became settled. Feb. 4, diarrhœa appeared in one colony; to-day it is alive, and as quiet as the others. A year ago saw 2 dead and 20 afflicted; with the same preparation for winter, and temperature from 32° to 40°.

C. W. DAYTON—61.

Bradford, Iowa, Feb. 22, 1884.

That "Improved" Case.

We have tried almost exactly the same arrangement described by Mr. Dibbern on page 133. We made cases in many ways, testing each thoroughly, covering a period of over two years, before adopting the one we previously described in the BEE JOURNAL. Much damage has been done by hastily recommending untried fixtures. We are very sure that if Mr. D. will try 20 or 40 cases, just as we make them, by the side of an equal number of his, he will discard his "improvements" the second year. There is no trouble in getting the sections out of our case. It is stronger, as we make it, than with his tin T, and can be made cheaper. The tins are objectionable on account of bending when handling the cases empty, if they strike against anything. The glass is also very objectionable. The necessitated outer case is more objectionable than all else, besides adding additional expense. We wish to use no separators under any consideration. We do not glass our honey, but if we did, we could glass two-thirds of the sections without the use of separators. We do not use ⅝ space above the sections, but scant ⅜. We have had no trouble whatever with any variation in the size of sections.

JAMES HEDDON.

Dowagiac, Mich.

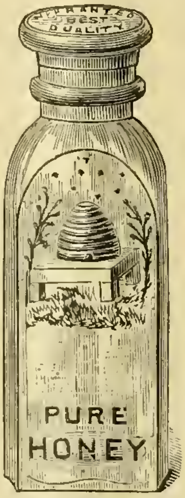
Small Honey Jars.

To-day's mail brings you my price list for 1884. I send you also per express, prepaid, a sample of our dime and ½ lb. honey jars, which I think, will prove quite an acquisition to the retail honey trade. The honey market is still without life, and our terrible flood had not a bit of beneficial effect on the market. I was fortunate enough to be above the high water mark.

CHAS. F. MUTH.

Cincinnati, O., Feb. 20, 1884.

[These small jars are quite attractive. The illustration shows the "dime jar of honey," and is simply marked "Pure Honey." The half-pound jar is of the same design, but is marked "½ pound Pure Honey." If they are not too expensive, they will add greatly to the retail trade in extracted honey.—ED.]



Old Foundation Freshened.

In answer to many inquiries, we wish to state that foundation from the previous season, that has been kept over winter and has become pale and brittle, can be readily freshened by exposing it for a minute to the sun's rays in warm weather, or better yet, by passing it over steam from a tea kettle or other boiler. It then becomes as malleable and fresh looking as when fresh-made. If it is already fastened in frames, it is superfluous to anneal it thus, as the bees do this same work themselves by their natural heat and moisture, as soon as they take possession of it.

CHAS. DADANT & SON.

Hamilton, Ill.

Vocabulary of Bee-Keeping.

If improper names and terms are continually allowed to find a place in the bee papers, there will hardly be any change for the better very soon. Beginners and new subscribers naturally adopt such terms as they read, and hand them down to coming generations through their communications to the papers. Would it not be best, that the editors of the respective papers strike out every incorrect term from any communication sent in for publication, and substitute the proper term intended by the writer, before it goes to press? In this way beginners would read nothing but what was right, and the old hands would gradually forget the old and wrong terms.

2. I would like to ask, what is the proper name for the second story of a two story hive? Here we call it "cap." If that is not correct, we ought to have some similarly brief name for it, as "second story," "upper hive," or "top-box" are too long for every day use, unless generally adopted. WM. MUTH-RASMUSSEN.

Independence, Cal., Feb. 12, 1884.

[It would be well for the Bee Papers to do as suggested; we have been trying to do so, as much as possible, for some years, but until a vocabulary is settled upon, it will be difficult to make such corrections.

2. We know of no better term than "second story;" the other terms are unappropriate and incorrect.—ED.]

Bees Packed with Clover Chaff.

I have passed through the log gum, fire and brimstone period. I have always tried to keep about 100 colonies over winter; that number would keep me busy in my young days, at swarming time. I am now in my 75th year, but I will not admit that I am an old fogie. I take most of my honey in one-pound sections; extracting is too much work for me. I increase my bees now by dividing them. I winter about one-half of my bees in a house, on Mr. Jones' plan, but I only make the walls 20 inches thick, for this latitude; the other half I winter on the summer stands, with a box to cover, allowing 2 inches of space between the boxes, which I pack with clover chaff; for an entrance for the bees, I cut two pieces of 6-inch spouting and put between the boxes, to keep up the packing from the entrance, which is ¼ of an inch wide and 12 inches long; then I bore 2 half-inch auger-holes, 2 inches above the entrance, to give air, in case of ice. This kind of entrance will give air enough, and will keep out mice, which are very destructive to bees in cold weather. Our honey season ends with the white clover, about July 10. There is an abundance of sweet clover on all of our roadsides, for ten miles square, and has been for the last 60 years; bees gather pollen from it, but no honey. I have been a close observer of bees, and know whereof I write.

JAMES C. WILSON.

New Concord, O.

A Floating Apiary.

The problem of what to do with a floating apiary was thrust upon me last week by the unprecedented flood in the Ohio river. I can recommend the so-called "long idea" hive as the best in the world for floating. I had about a dozen of them afloat last year, and the bees kept above water, and were uninjured. This year I saved my apiary by floating about 50 colonies on rafts, and confining about the same number in a boom, where they floated four days. A great many bees have been lost in the Ohio Valley, by the flood. I have picked up a number of box hives and a few movable comb hives, but the bees were all dead in them. The water was 5 feet deep in the lower rooms of my dwelling last week. My buildings and fencings are all wrecked; my workshop badly damaged, and the machinery was under water for several days. Words cannot picture the distress among the poorer classes, caused by this flood. The water was over 5 feet higher than ever before known to be.

W. C. PELHAM.

Maysville, Ky., Feb. 21, 1884.

Bees Doing Well.

I have 96 colonies of bees in the cellar under my dwelling house. Several of them are only 3 to 4 frame nuclei. The nuclei seems to be wintering as well as the stronger colonies. Some colonies have stores of honey only; some have sugar only, but most of them have both, and the pollen is generally left in. Some have brood. They have been in the cellar 101 days without a flight, and no signs of diarrhœa. The cellar temperature is from 40° to 52°; generally from 46° to 50°. I do not like it lower than 46°. The hives have bottoms, but no tops except single pieces of burlap, and some of these have holes through them. The hives are the 8-frame Langstroth. They are so piled that there are about 3 inches between the tops in one row and the bottoms in the row above. Occasionally we sweep the cellar, and, so far, have taken up about a bushel of dead bees. Our hives are dry; no mold in the cellar, except among the dead bees on the cemented floor. The cellar has an underground ventilator of 6-inch tile, and a 6-inch stove-pipe reaching to within 20 inches of the cellar floor, and connecting with the stove-pipe in the room above. IRA ORVIS—96.

Whitby, Ont., Feb. 21, 1884.

Bee Diarrhœa.

There seems to be a sincere wish to find out if we can the cause of dysentery among bees, especially is this the case as relates to wintering; some endorse the pollen theory, but from my limited experience I am inclined to think that dysentery may be produced by either of the following causes: Sour honey, breeding and eating pollen in confinement, gorging themselves with honey without chance for a flight, and want of proper ventilation; and in this connection I wish to quote a few lines from Langstroth on the honey bee, page 127: "I examined, last summer, the bees of a new swarm which had been suffocated for want of air, and found their bodies distended with a yellow and noisesome substance just as though they had perished from dysentery. A few were still alive, and instead of honey, their bodies were filled with the same disgusting fluid, although the bees had not been shut up more than two hours." Now, how can this be explained on the pollen theory? Is it not best to be careful about endorsing any set theory until we are in possession of a larger amount of facts than we now possess? In the mean time let every bee-keeper be on the lookout to discover the true cause of this fearful disease. J. M. GOODRICH.

South Frankfort, Mich., Feb. 20, 1884.

Are Bees Taxable in Michigan?

PROF. COOK:—As you are a brother apiarist and scholar, I address you for the purpose of gaining information. If you will tell us, through the BEE JOURNAL, whether bees are taxable in Michigan, and if so, is the whole colony taxable or only queen and hive, and are any number of colonies exempt, you will not only oblige me, but I think many others. I have kept bees about five years, and have never known any to be taxed, in this place, until last year my 42 colonies in Doolittle hives were assessed $200. I am a farmer and an apiarist on a small scale. A. P. COWAN.

Grattan. Mich.

In reply to Mr. Cowan, I would state that all property not exempted by special act, is liable to taxation. Bees are property, and hence taxable. Few have bees, and many who do, keep so few bees, that they have escaped notice, and so find no place on the assessor's blanks. Therefore, usage has omitted bees. The bee-keeper, however, desires the protection of the law and all the privileges of citizenship: and so there is no reason in justice why his special property should not bear the burdens of taxation. The omission in the past has resulted from an oversight. All personal property not exempted is taxable, and as bees are not specially mentioned, they would be, like all other property, taxed according to the valuation placed on them by the assessor. A. J. COOK.

Double-Walled Hives.

In the issue of Dec. 19, 1883, of the BEE JOURNAL, Mr. F. M. Cheeney, in speaking of "double-walled hives" for summer use, says: "They are too much like a person putting on an overcoat in July to keep out the heat. The dead-air space between the outer and inner box will be of a higher temperature than the surrounding air, etc." Now, either Mr. Cheeney is mistaken in this matter, or else all the ideas of scientific men in regard to heat and ventilation are entirely wrong. Dead-air is an almost perfect non-conductor of heat and cold. Were it not so, a double-walled house or hive would be colder in winter than a single. If a double-walled hive is a protection from cold (and there is no doubt on this point), it must also be a protection from heat, and the only objection that has been made to their use that I have seen (save this of Mr. Cheeney) is that they will not warm up as readily in the spring; as a single-walled hive. The object of a double-wall, is to secure evenness of temperature, and thus preserve quietness inside the hive. I do not write this for the purpose of starting a discussion, but to set Mr. C. right on a point which he evidently misaprehends.

J. E. POND, JR.

Foxboro, Mass., Feb. 22, 1883.

Educate the Customers.

"Why sell extracted for less than comb honey?" This is the inquiry I am confronted with almost daily, and one who put this same question, yesterday, said he always thought that there was some adulteration to cheapen it. Said he: "It looks to me as though pure honey out of the comb is worth more than that in the comb; it must be worth something to take it out of the comb." When I explained it to him as best I could, he said: "Oh, I see now;" and I sold him 23 pounds of extracted honey; but he said: "Nine-tenths of the people think the same as I did." Why not get up a circular to scatter among the people, that will make this point clear to them? Let us have something short, but to the point. Then I, for one, would invest and spread them in my neighborhood, and see what would be the result. Even if we use pails, cans, jars, etc., and leave this prejudice in the minds of people, extracted honey will drag along and find slow sale.

S. SMITH.

Neoga, Ill., Feb. 27, 1884.

[We will, as suggested, get up some leaflets on this point, and supply them at 50 cents per 100, with the honey-producers' name and address *free*, when 200 or more are ordered at one time, and send them to any address by mail postpaid—all provided that enough will be wanted to pay expenses. Who will take them?—ED.]

Ants' Wings.

J. D. Enas, on page 118, speaking of the queen ant's wings being clipped, asks, "Am I right?" He is right; she does it herself. I have seen her perform the operation more than once. After, I suppose a successful flight to meet the drone ant, I have seen the queen ant alight, crawl a few inches, stop, turn her head around, and with her mandibles, like a pair of scissors, clip one wing and the other close to her body. G. O. GRIST.

North Springfield, Mo.

Bee Space.

On page 133 of the BEE JOURNAL, I am made to say: Allow ⅝ inch bee-space over the sections. This is "too much of a good thing." I intended to say 5-16 inch, and think ¼ inch not too small. C. H. DIBBERN.

Milan, Ill., Feb. 27, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Economizing Wax.

I have about 2,000 Gallup frames wired, but not nealed. Can I fill them with thin foundation (made on Given press) by the button hook and melted wax process, and be comparatively sure of success if the frames of foundation are first put in the brood apartment 1 or 2 at a time and allowed to be drawn out there? In view of the scarcity of wax, I wish to use the sheets as light as possible, say 12 sheets to the pound.

A. A. E. WILBUR.

Moravia, N. Y., Feb. 22, 1884.

ANSWER.—I think you make a mistake, and perhaps an unprofitable one in using thin foundation in the brood-chamber; another mistake, by using any melted wax to fasten the foundation to the top-bar; another, by inserting sheets of foundation, a few at a time; combs will not be built as perfectly in that way. For my preferred method of using foundation in the brood-chamber, I will refer you to page 348 of last year, and page 91 of this year.

Queenlessness.

1. What is best to be done with the combs and bees of a queenless colony, during February and March, in Central Ohio?

2. Is it a good plan to remove all unoccupied combs as early in the spring as possible?

I have 82 colonies now, having lost 2 by death, and one with plenty of bees, but I found its queen in front of the hive.

J. R. ROEBUCK.

Burton City, O., Feb. 19, 1884.

ANSWERS.—1. If I had such a colony with plenty of bees, I would unite some weak colony with a good queen with them, if I had such an one; if not, would try to get a queen elsewhere. If there are but few bees in the hive, I would shake them out and lay the combs away.

2. I do not remove unoccupied combs, in weak colonies, unless they are filled with honey, and the colony is too weak to defend the entrance against robber bees. Trouble from moths is practically over here. Finding a queen in front of a hive, does not prove *that* colony queenless.

Pure Beeswax.

Herewith I send you samples of comb foundation. Will will kindly give your opinion regarding them?

1. Are they pure wax?

2. If adulterated wax is used in the making of them, what is the adulterating constituent?

I am constrained to ask your opinion concerning this comb foundation, because it is so different in appearance to some samples I have received, and suggests to my mind that it is adulterated in some way. Many bee-keepers who have been supplied with it, find that they cannot work easily with the thin foundation, on account of its being so brittle. If this foundation is made from pure wax, what is the reason of its appearance being so different to that of the American?

BEE-KEEPER IN NEW ZEALAND.

ANSWER.—On examination I believe the foundation to be of pure wax. I forwarded a sample to Chas. Dadant & Son, who are not only good authority on beeswax, but bees without the wax, and they consider it pure. I will give you my opinion of its faults. First, there is a great difference in the pliability of pure beeswax. This foundation was likely made from hard, brittle wax; and secondly, it has now been made so long that it has lost much of the little plasticity it had when new. Besides this, I consider it poor print, as it has too thick a base, and small, hard-pressed sidewalls or lines.

Diseased Bees.

Will Mr. Heddon tell through the BEE JOURNAL what is the cause of my bees having the front of their hives daubed over? If they have any disease, what shall I use to cure them?

A SUBSCRIBER.

ANSWER.—The cause of your bees daubing the front of your hive is, that the food of which they have been partaking, has so loaded them with fecal matter that they can no longer retain it; not even until they can rise upon the wing. We know of no cure, but we are working at a preventive for this condition of things, which is called bee dysentery.

Midwinter Report.

In the last week in January, 1883, I examined 51 colonies, all on the summer stands in A. I. Root's chaff hives. The brood frames of 50 of these were covered with one thickness of old sail-cloth, and above these were clover-chaff cushions, filling the upper story completely but loosely, admitting free circulation. Forty-nine colonies were in splendid condition, having plenty of healthy bees and good honey. A late swarm had perished, being queenless. In preparing my colonies for winter, I had unaccountably overlooked one, and this colony had no covering whatever above the brood frames. It was one of my strongest colonies, both in numbers and stores, when the section frames were removed late in the fall, now there was only a handful of bees which showed any life, and they were partly covered by their dead companions, and there was present dysentery in its most malignant form. Had this colony been prepared for winter like the others of my apiary, I can but conclude that they, to-day, would be numbered among my best, and like them would be free from that dreaded malady, dysentery. All the colonies I have lost during the past 6 years by this disease, have perished under the same conditions which proved so fatal to this fine colony. I am convinced that there are various causes which induce dysentery, and the one most to be feared is a long period of intensly cold weather with insufficient protection. Please answer the following question: Do bees need upward ventilation to secure best results when run for section honey? Between last frame and side of Root's chaff hive there is a space of ¾ inch the whole width of the hive; ought this to be closed when bees are working in the sections?

M. I. TODD.

Wakeman, O., Feb. 11, 1884.

ANSWERS.—1. To those who have never seen dysentery among bees with conditions just opposite to those surrounding the one colony you mention, and found just such neglected colonies with seemingly enough upward-ventilation to freeze them to death, the only ones in the apiary that was free from the disease, your experience would cause them to believe that the open chamber above caused their death. There are many, however, that must know that *that* was not the cause; but I am forced to believe that in your apiary, this winter, it was the aggravation to the cause of dysentery. I see no other rational way to look at it.

2. I have never been able to discover any advantage in giving upward ventilation during the honey flow. I find it advantageous to have but one thickness of material between the inside and outside of the supers, and that well shaded. An outside cap over all, I find not only expensive to make and manipulate, but a positive damage.

3. The space you speak of will do no harm, provided the bees do not build comb in it, and that will depend upon your system of management and location.

Position of Frames in the Hive.

Will Mr. James Heddon please answer this question through the BEE JOURNAL: What benefit is there in having the frame to drop below the level of the hive?

FREDERIC ALLEMAND.

Eden, Ont., Feb. 20, 1884.

ANSWER.—I suppose a host of old practical bee-keepers are smiling at this question, and wondering where I can begin and leave off, in answering it. It is something like, why is health preferable to sickness? This I consider the most valuable claim of the now expired Langstroth patent. Mr. L. discovered that bees would glue all pieces of wood together that were not far enough apart for them to pass between them readily. He found that in a space a little less than ⅜ inch, bees would build but little comb, and it being sufficiently large for their passage, they would not glue it up. Now, in putting a flat cover on to a hive, if the frames did not drop bee-space below the top of the hive, the liability to crush bees in placing it, would be greatly increased. After it had remained in place sometime it would be a very difficult job to remove it. Some of the frames would stick to it and come up with the cover, grinding the bees between the combs, giving them a Cyprianic disposition. When the cover was replaced, the bits of glue mismatching their former position, the cover would be slightly raised above its former position, then a lot more glue is added, and so on until there is a pound or less of this interesting commodity about the top of the hive. This bee space can be secured by a sink in the cover, made by nailing ⅜ strips around its outer edge. If the frames come flush with the top of the hive, the surplus receptacles would need to be arranged in the same manner. It is preferable to have the sink in the hive, that is, have the frames drop 5-16 below. Much the same trouble with glue is experienced in the use of cloths for summer use. We much object to their use at any time when the bees are gathering.

After-Swarms.

On page 422, last year's JOURNAL, Mr. Heddon says, "No, sir, I do not extract to give the queen room, nor cut queen-cells. I have learned better, than that. With proper fixtures and management, there is no necessity for so doing." How does he prevent after-swarming, and what does he do with such, if there is any?

LEVI FATZINGER.

Janesville, Wis., Feb. 18, 1884.

ANSWER.—All I do to prevent after-swarming is to keep the hives well shaded, giving them plenty of room, the same as we do to discourage prime swarms. We have found that as long as we can keep the desire for increase out of the minds of the bees, we get our pay in surplus honey; but when we undertake to physically compel them to remain together, we are losers by so doing, except by the plan given on page 126 of the BEE JOURNAL for 1883. While this method does not prevent after-swarms, it prevents increase of colonies for the season.

Bees Robbing.

"Henry, my bees are robbing yours." Early in the morning Henry finds his hive rich in honey, but not a bee in the hive. This was the condition of bees last fall, more so than common, not only colonies that gave swarms and then built up again, but first and after swarms also. Can you give the cause of the above unexpected deficiency in bees? One man said, as the fall was unusually poor for bees, they killed their queen. Is that right? Bees worked lively on catnip this fall, when it was so dry. I think bees would be in much worse condition for winter than they are, had it not been for catnip. A year ago bees went into winter quarters very strong in bees, and formed too much dampness; the strongest ones suffering most; but this fall it is the other way, very short in bees, some but ½ gallon of bees, or even less. If they come out all right in the spring, then we will cheer the Minnesota-man that dumps one-half of the bees out, when he carries them into winter quarters. I had 1½ tons of comb honey this fall; increased too much for the poor fall that followed. I have 46 with slough-grass for wind break on the north, 17 packed in sawdust, 8 packed in chaff all around and above, without caps, and the entrance open, with a 2-inch hole in the bottom-board covered with wire, and straw under all, as last year, which did as well as any in summer. A dozen standing out, and 40, mostly the weak ones, in the bee house; the last named ones are very still at 42°, but easily disturbed. Also 6, box hive department, on a board south of the bee house, with holes in the bottom-board.

E. PICKUP.

Limerick, Ill.

ANSWER.—We could give causes for the condition of things mentioned above, but as there are perhaps several, we fear we may not hit the mark at such a long range. We do not think bees kill their queen on the account of a "poor fall for bees." We think Mr. Pickup knows this.

Will Cold Kill Bees?

I have often seen it stated that cold alone will not kill bees. My experience, this winter, leads me to think differently. I left 6 colonies of bees out doors in double-walled chaff or sawdust hives, in order to test them as winter hives. The 6 colonies were as nearly equal as possible. One windy night in January the covers were blown off of two of the hives. Upon examination, a few days ago, the bees were dead, while the bees in the other 4 were all right. The dead colonies had plenty of stores, and were perfectly dry. Now, if the exposure to cold on that windy night did not kill those two colonies, what did?

E. C. CAMPBELL.

Cayuga, Ont., Feb. 19, 1884.

ANSWER.—The statement that cold will not kill bees, of course means when they are enclosed in a hive, and properly clustered so that the inner and outer members of the cluster frequently change places with each other. Of course when the exposure becomes too great, a low temperature causes instant death. As we see when they drop upon the snow, or lay out upon a board during a frosty night. Our great enemy in wintering is dysentery: that's all we care about. I presume the 2 colonies, above referred to, did not have that. Practically, it makes but little difference whether such exposure as you mention kill your bees or not, none of us expect to lose a great many from such casualties.

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☞ We intend to organize a bee-keepers' association for Southern Indiana on March 20, 1884, to meet at the Merchants and Manufacturers' Club Rooms, Madison, Ind., at 9:30 a. m. Kentucky bee-keepers are invited to participate. H. C. WHITE.

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☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 3, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand.. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 15@21c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & CO.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT, 161 South Water St.

KANSAS CITY, MO.

HONEY—Same scarcity of choice white 2 lb. sections as reported last week, and a few thousand pounds would be readily taken at 17 to 18c. One pound sections in fair supply, and bring us more at present than 2 lbs. Dark comb very slow sale. Stocks are low on dark extracted, and in fair supply for white. Prices range 8@10c.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Market is quiet, and common qualities difficult to place at anything like satisfactory figures. Fancy qualities are scarce. White to extra white comb, 15@18c; dark to good, 9@11c; extracted, choice to extra white, 6@7½c.; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and dull. Comb 12@16c, and strained and extracted 6@8c per lb. Top rates for fancy small packages.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.

BEESWAX—In great demand, but no supply; nominally 30c. per lb.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

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☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*

Kingston, Tex., Jan. 16, 1884.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

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Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail, postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

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Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 25
" 200 colonies (420 pages)...... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

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☞ We have received the annual Catalogue of vegetable, flower and grain seeds grown by James H. Gregory, Marblehead, Mass., which has been annually advertised in the Bee Journal for the past 10 years. It is an ellegantly-illustrated quarto of 60 pages, and will be sent free to all applicants.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

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◆

☞ Attention is called to the Engraving of the Bee-Hive Factory at Newcomerstown, O., which may be found on another page of this issue of the Journal.

Bees! Queens! Nuclei!

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BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

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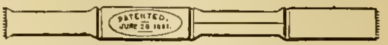
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1868. 1884.

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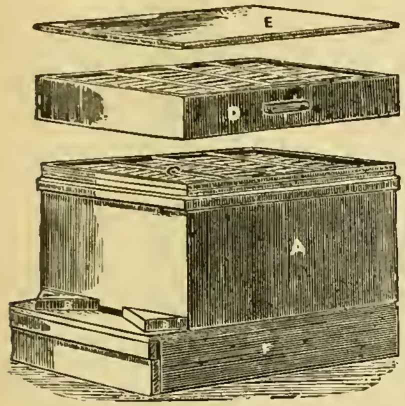

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And be SURE to state whether or not you have my Circular for 1883.

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JAMES HEDDON,
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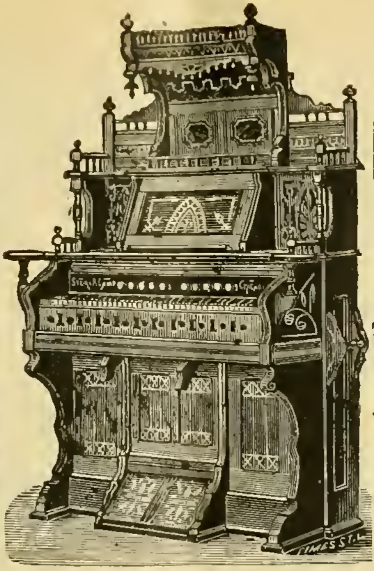

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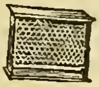

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☞ State where you saw this. 8A2t 10Ctf

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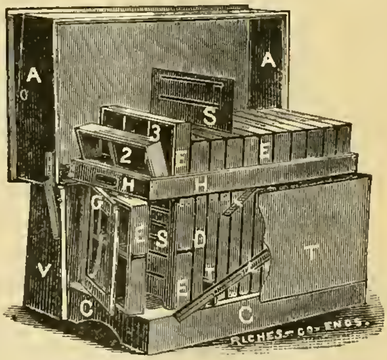

The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

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Pure Italian Bees and Queens

For further information, send for Circular.
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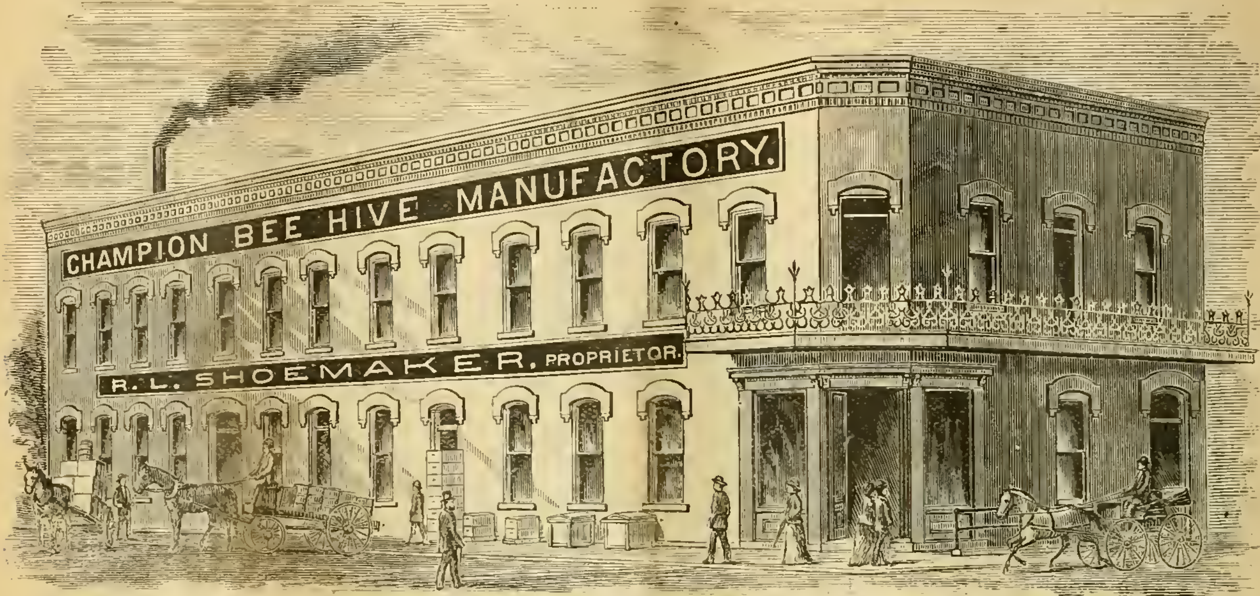
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R. L. SHOEMAKER, PROPRIETOR.

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COMBINED.

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Yours, CHAS. DADANT & SON.

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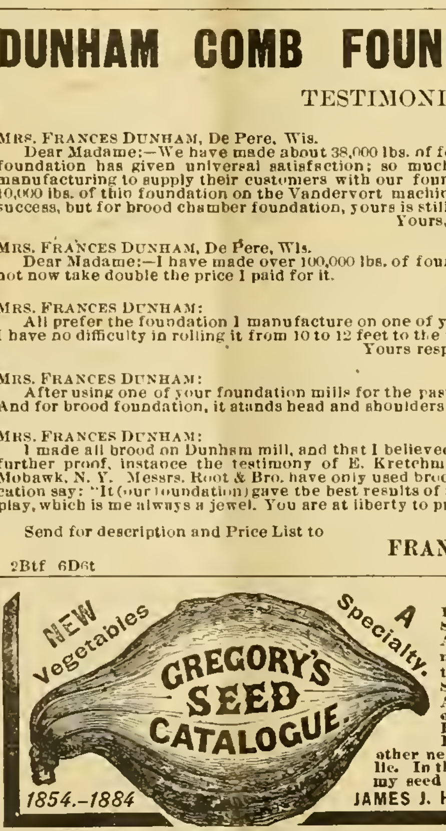
Send for description and Price List to

FRANCES DUNHAM, De Pere, Wis.

2Btf 6D6t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1854.-1884

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10C3t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861.

Chicago, Ill., March 12, 1884.

VOL. XX. No. 11

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1**.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

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☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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☞ The Mahoning Valley bee-keepers will hold their next meeting in the Town Hall at Newton Falls, O., on Thursday, April 10, 1884, at 10 a. m.
E. W. TURNER, *Sec.*
L. CARSON, *Pres.*

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

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King's Text Book.....................	3 00..	2 75
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The Apiculturist, (Silas M. Locke)..	3 00..	2 75
New Eng. Apiarian, (W.W.Merrill)..	2 75..	2 50
British Bee Journal..................	3 75..	3 50
The 8 above-named papers.......	9 00..	7 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyhoga County. O. All interested are invited.
J. R. REED, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa, will meet at the Emmett house, in Dexter, on Saturday, March 29, at 10 a. m. sharp. All who are interested in apiculture are invited to attend.
M. E. DARBY, *Sec.*
W. B. KENYON, *Pres.*

☞ The next meeting of the Bee-Keepers' Association of Central Illinois, will be held in the office of the County surveyor, in Bloomington, on Wednesday April 9.
W. B. LAWRENCE, *Sec.*

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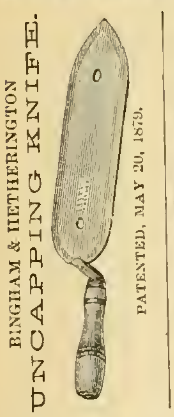
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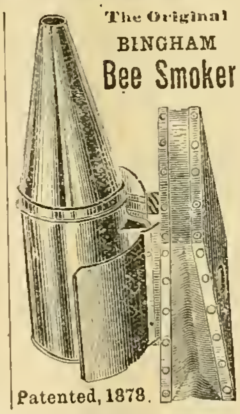

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.,** postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition. **5c.**; per dozen, **50c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

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Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

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Deutsche Buecher,

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Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände —Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 5 Cents.

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THOMAS G. NEWMAN.

925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., MARCH 12, 1884. No. 11.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Wintering Bees in England.

While in North America we have had one of the coldest winters on record—with the mercury dancing around the thirties below zero, in the neighborhood of Chicago, it is refreshing to have English papers record the fact that they have there had a *mild* winter for the bees. The London *Journal of Horticulture* for Feb. 14 has just come to hand, and in it we find the following on the present winter for bees in England, and the loss of bees by destructive birds in the spring:

This current winter has been, perhaps, the most open for many years. Bees have consequently been more or less on the move in all parts of the country; not so much so in our own apiary as with those whose hives stand in warm sunny places. Where bees have been unusually active the mortality must have been very great in winter. Bee-keepers, as a rule, are not careful enough to shade the entrances to hives, and do all they can to keep the bees in. A flight now and then during the winter is most inducive to health, and in most winters opportunities for this occur after some three or four weeks of captivity. But this season has given by far too many of such opportunities, and the consequence is that during sunny weather bees have taken longer flights than usual, and many have been out never to return. During the winter months birds are much more ready to snap up the wanderers; less food of other sort is available. Tomtits are especially voracious at this time of the year, and we have watched them keeping a good look-out before hives for their prey. Sparrows do not seem to seek for bees as food until nesting time, when a pair of sparrows will, according to a calculation we once made, after carefully watched how often the old birds returned for a bee, take a good-sized swarm during the time they are feeding up a nest of young ones. The sparrow, like the tomtit, carefully but very dexterously first extracts the sting before giving the insect to its young or eating it itself. Thus the mild season which furnishes food for the birds thins the hive. Much food is also consumed where bees get out often when they should be clustering at rest.

Bees Suffering by Fire and Flood.

The Los Angeles, Cal., *Herald* remarks as follows on the recent disasters to bees and bee-keepers in that locality:

During the recent rains, the bee ranches in the canyons have suffered severely. Bee hives and honey houses have been swept away down into the valley and rendered nearly worthless. From the Coldwater Canyon, where Mr. Levering reported a waterspout, we learn that the water carried down all the appliances of bee ranches and strewed them over the plains below. The torrent was so great that it swept the soil, sand, boulders, houses and corrals out of the canyons with such force as to tear down board fences miles away where no stream was ever known to run before, and may not run again for a century. The loss of property is very large among the bee ranchers, and although the rain will make an abundance of flowers for the use of the bees, the rain has made havoc among the bees for this year. Hereafter more care must be exercised in our mountain canyons in protecting bees from fire and flood. Some of the large apiculturists were burned out last fall in the mountain fires, and now others are washed out. More caution is needed hereafter in looking after this great industry.

☞ The *Grand Ledge Independent* gives the following as a sure cure for croup: "One teaspoonful of bloodroot pulverized and steeped in two ounces of sharp cider vinegar; strain and add three ounces of extracted honey. Dose, one-half teaspoonful as often as the case may seem to require; not to be used as a preventive.

☞ The Report of the Convention at Davenport, Iowa, is exceedingly long, and we shall be obliged to abbreviate it, but cannot give it until the next issue.

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

Purdy's Catalogue of small fruit, Palmyra, N. Y.—34 pages.

Isaac F. Tillinghast, La Plume, Pa.—34 pages—Seed Catalogue.

N. E. Doane, Plpestone, Mich.—2 pages—hives, cases and frames.

H. C. White, Madison, Ind.—6 pages—Palace bee hive and apiarian supplies.

McKallip, Margrave & Co., Hiawatha, Kans.—4 pages—apiarian supplies.

☞ The "Northeastern Bee-Keepers' Association," of New York, have sent a petition to the Legislature of that State, signed by over 160 bee-keepers, asking for the enactment of a law to protect them against the ravages of foul brood among bees. The law provides for the total destruction of bees, hives, etc., where it exists, under a penalty of $50 for the first offense, and $100 for each additional offense.

☞ A very large and beautifully executed picture of Bartholdi's great statue of "Liberty Enlightening the World," has been presented to us by the Travelers' Ins. Co., of Hartford, Conn., who have been among the most liberal contributors to the Fund. The picture, which is 26x36 inches in size, gives an excellent idea of the superb work of art which is to adorn the harbor of New York.

☞ Several more letters have been received during the past week, containing money without giving the writers' names. It is too bad to file them away in a "pigeon hole" to await another letter, perhaps calling us hard names—a "swindler" most likely—for not filling the orders. However, we cannot help it; the only remedy is to keep on advising every one to be careful to give their names and addresses on every letter they write.

CORRESPONDENCE

For the American Bee Journal.

Review of the Bee Journal of Feb. 20.

JAMES HEDDON.

The BEE JOURNAL for Feb. 20 contains more than a usual amount of what seems to me most valuable matter. In these days, when there is so much worthless apicultural literature afloat, is not such a number truly refreshing? I feel as though I could not file away this number into the Emerson binder without commenting upon some valuable articles.

Bro. Rutherford's showing that the mother bee is in no proper sense a queen, but that the worker bees govern as one mind, is to the point, and and will, no doubt, shed light to the minds of many beginners.

Bro. Hutchinson's article on separators is very close to our own experience, as many well know.

Bro. Secor's article on "Marketing Honey," suits me first rate, and I think the point made about selling cheaply about home, to keep your field clear of other bee-keepers, is well taken. I have done just this for years. We must expect, however, that as long as our agricultural papers are so liberally contributed to by so many writers who tell the farmer that "bees work for nothing and board themselves," that it costs merely nothing to raise two or three hundred pounds of honey annually, that there will be some dupes with whom to whet an apetite for honey, is to start into the bee business. I try to counteract this sentiment as far as possible by such essays as the one I wrote for our Southern Michigan Farmers' Institute, and which I have presented to many brother bee-keepers for the same use.

Bro. Enas tells us how far his bees go for nectar. This article alone is worth more to me than the yearly price of the JOURNAL. How many miss it by dividing their colonies up into different apiaries, only four miles apart! May it not prove ten miles more like the right distance? We want to have Bro. E., and as many others as can, tell us what difference there is in the accumulation of stores between the long and short flights, under what conditions bees will fly long distances for nectar, and all about these important topics to the practical producers.

Next our old friend, W. J. Davis, and Bro. Poppleton discussed the question—"Is prolificness desirable in queens?" How dare you take such a stand? Eight or ten years ago, at one of our Kalamazoo conventions, I was ridiculed for taking the same position. We want no more prolificness in the queen than her combs will accommodate. We *do* want as much. My claim has always been that the cheapest and best way to get is to use smaller hives. It seems to me strange that some bee-keepers do not see that the capital which produces our bees is one dollar's worth of hive, two dollars' worth of comb, five dollars' worth of honey out of "our field," and two cents' worth of queen (queens cost merely nothing when not rearing and holding them for shipment,—the colonies producing them only as they require them).

Looked at in this light, of what value is extra prolificness? Should it be found that such superior prolificness in numbers should go hand in hand with inferior qualities of each individual bee (which is one of the rules of nature), thus it would follow that it would be a serious damage. It costs just as much, after once started, to bring into being inferior as superior stock. I have entertained these views, and have put them before the public from time to time for more than 12 years.

Now let us see if Bro. Ackerman is going astray on the hive question. I do not like the Simplicity hive for I do not consider it "readily movable" as Bro. A. does (See proposition No. 1, page 118). Of course the above is a comparative term. The large chaff hive is "readily movable" as viewed by the building mover, but for the ladies or men of light-muscle, or in fact any man who wishes to do quick and sharp work, the Simplicity can hardly be called "readily movable." We think our hive is—now let us compare. The Simplicity has ⅞ inch sides; ours has ¾. It has ⅞ top and bottom, heavily cleated; ours has ⅝ inch, lightly cleated, the bottom only using one front cleat, it being nailed permanently to the hive. I do not consider *any* hive "readily movable" with a detached bottom-board, which forces one to take hold under it when lifting the hive. Bro. A. does not seem to understand our objections to the "telescoping principle." When the stories are so arranged that you can place them less than bee-space from each other (up and down), and enough sidewise so that the right side and back end of the upper story is just off from the right side and back end of the lower one, then you can move it side and endwise about an inch when it comes to place without the possibility of crushing any bees except where the edges of the four boards crossed each other. This method of adjusting stories, so far as I know, never has been, and I think never will be excelled.

The telescoping principle prevents this movement. It seems strange that any person of experience should fear the "inclemency of the weather" through a joint made by placing one straight edge on top of another, with bees inside to hermetically seal it at once. We have never experienced the least injury by it. Mr. Langstroth had reference to the space above, below, and at the ends of the brood-frames. We have discovered from actual experience that bees suffer very much more by heat during the honey flow when their surplus receptacles has another case outside of it.

I used, last season, just such wide frame supers as Bro. A. mentions in article 4, viz: one-story on the tiering-up plan. Of course the super had no outer covering over it. We do not like it as well as our case, which uses no wide frames nor separators. He says with our 8-frame brood-chamber, that it is not possible for us to insert wide frames in said chamber. We think that with 8 or 10 frame brood-chambers that it cannot be "possible" that we shall ever use wide frames, or undertake to raise comb honey in the brood-chamber. With our system and arrangement there is no need of it, and we are glad of it, because there are serious objections to such a procedure.

Must we use wide frames and division-boards and surplus honey in the brood-chamber in order to best get along with a 10 Langstroth frame hive? If my hives were 14 inches wide, I should put in division-boards that would never come out, and when I made new ones, I should nail the ends to the division-boards, saw off the extra length of the end pieces, and have an 8-frame hive and done with it. It was not without experiencing the draw-backs connected with the 10-frame hive that I changed to the one of 8 frames.

Dowagiac, Mich.

For the American Bee Journal.

Marketing Extracted Honey.

W. H. S. GROUT.

I disagree with Mr. Buchanan in regard to extracted honey. I have had 13 year's experience in the article, and have produced no comb honey since the days of large boxes, and feel no inclination to do so.

The chief obstacle in selling extracted honey, arises from taking it from the hive before it is sufficiently cured. When I first began taking honey in this manner, it was extracted once in 3 days, and have gradually lengthened the time until now. I let it remain until the bees are through gathering from basswood. The quality and body has vastly improved, as also has the home market, until I no longer need to place it on sale in towns near me, and, after selling 2,700 lbs. before it had time to candy much last year, people came nearly every day for a month or two for more; I could easily have sold 5,000 lbs. more if I had had it, and the retail stores are anxious to have it on hand now. The sales have vastly improved, and it is taking its place with comb honey, and costs the consumer less.

I use 40-inch hives, and am to no expense for fixtures, sections, foundation, etc., having extra comb sufficient for all my hives, if well spread. Allow me to say to Mr. Youngman, that much wax can be saved in this manner. I use 18 combs to the hive, and, when the honey is extracted, the hives average 75 lbs. of honey each, and the cappings fill a common milk pan, yielding about 1 lb. of nice wax each. The proportion of honey strained from cappings last year was 800 lbs., out of a total product of 3,000 lbs.

It seems to me that the labor is much less in running an apiary in this manner than in working for comb. Where a home market is well established, the worry and vexation is saved, besides loss in putting up and sending to some city. Each season is looked forward to with much eagerness by the apiarist, as well as his customers, being a mutual benefit to both.

There is something said about extracting often and ripening afterward by artificial means; but can the honey be as perfectly ripened in this way? I would be pleased to see an article from L. C. Root on this subject.

Kennedy, N. Y.

For the American Bee Journal

Erroneous Conclusions.

DR. G. L. TINKER.

Mr. Heddon has given us many thoughts on *a priori*, or from cause to effect reasoning. Being an expounder of principles, the inference would be that the master himself ought to be well-nigh infallible in his inductions, deductions, and final conclusion. But is he? Let us see. He says on page 653 of the Bee Journal, "The reader will clearly see that *my theory can easily be tested* by simply preparing numerous colonies in such manner that they can partake only of *that most oxygenized food*, sugar syrup, removing all other foods." The italics are mine. In other words, Mr. Heddon concludes in a very positive manner that if bees can be safely wintered on sugar syrup alone, that the pollen theory is demonstrated?

The writer believes the above conclusion to be incorrectly drawn, and altogether erroneous. But Mr. H. stakes his all upon the cane sugar test, and adds, "Nothing can defeat us from getting what will be to us a perfectly satisfactory proof."

If the demonstration of the pollen theory is to turn so easily upon this test, why did not Mr. Heddon elaborate the idea and endeavor to establish it in the mind of the readers in the course of our late discussion, that the sugar test would be crucial and final? On page 440 of the Bee Journal was given substantial proof that such conclusion would be erroneous, and Mr. H. never so much as alluded to the matter, and the inference was that the stand taken upon this point was admitted. In the quotation above made, he uses the phrase, "that most oxygenized food," meaning, as I take it, that cane sugar possesses a larger percentage of the hydro-carbons, or heat producing elements than honey. If this is his meaning, he can see that a colony on cane sugar stores is able to maintain a higher relative degree of temperature in the hive than upon the natural stores, and hence, that the conditions upon which health depends are greatly changed.

I have several times endeavored to show that, practically, heat is life to a colony of bees in winter, no matter whether their stores be honey and pollen or sugar syrup. I have assumed that it is the great antidote to bee diarrhœa, and there has been none to dispute; that a proper degree of heat of the cluster and interior of the hive was potent to expel all dampness and keep the hive and combs dry; that under most favorable conditions in winter confinement, bees may and do eat pollen with impunity, and that they void their feces in the hive, as occasion may require, in the form of the so-called "dry powder.', This I have proved to my full satisfaction last winter by numerous tests and observations.

When bees are subject to very unfavorable conditions in winter, the temperature of the cluster and interior of the hive falls below the point of health. The beginning of their ills is here. The hive and combs become damp; the temperature continues to fall; the bees become disturbed, not so much with the indigestible particles of the pollen consumed as by a yellowish watery fluid; and diarrhœa is the result quite independently of the effects of the pollen or honey.

When the excrement of the bees, owing to the unfavorable conditions, cannot be voided in the hive, except in a thin, mushy or fluid state, they have an instinct to retain it, but not otherwise. The idea prevails, that naturally bees retain their excrement in confinement, but I claim that they do not until they get into an unhealthy condition, and of this fact *there is ample evidence*.

But if heat is the agent upon which so much depends to avert unhealthy conditions, and sugar or syrup furnishes the most heat of any known food that bees consume, how are we to conclude that the sugar test in the absence of pollen is going to demonstrate the pollen theory? Let Mr. Heddon answer, if he can.

There is only one test that would be fair and free from error, and it is here given for Mr. Heddon's benefit. If he shall be able to produce bee diarrhœa by following these directions, I will admit that pollen may be a cause of the disorder. If, however, it cannot be so produced, then Mr. Heddon may get into that "ship" with all his honorable company and scuttle her.

The test is as follows: About the middle of September take from a single-walled standard Langstroth hive containing a full colony upon combs recently built, four brood combs having much pollen. Extract the honey and place them in the super of another colony until all the honey is licked up and the pollen alone remains. After the brood has all emerged from the remaining combs of the colony, take them out and return the four prepared ones. Space them in the centre of the hive ½ inch apart, and place thin division-boards at the sides. Do this at a date when nectar ceases to come in in appreciable quantity. Then feed rapidly a moderately thick syrup of granulated sugar until the combs are filled. Lay a few short sticks across the frames and put a case 8 inches deep, the same size as the cover on the hive, and make both tight fitting. On the first frosty morning, put a clean woolen cloth over the frames, and fill into the hive sifted timothy chaff until the case is full. Protect the hive on the bottom by setting it up from the ground on a stand as described on page 500 of the Bee Journal, and subsequently ventilate and manage the colony as there directed.

Of course it would be impossible to say how far North such a test might be made in out-door wintering without unfavorable conditions arising, but the test should be fair as far North as Grand Rapids, or the 43 parallel.

I have 3 colonies prepared as above except the combs contained a little sealed honey besides much pollen. From their comparative activity it is plain to be seen that their diet is strongly stimulating or heat-producing. No dead bees are to be seen about these hives as yet, while all the others have lost more or less.

But I must not close this article without saying that Mr. Heddon's earnest and honest efforts to solve the mysteries involved in the causation of bee diarrhœa are appreciated by myself, and I believe by all other bee-keepers. Surely, he can have "nothing to regret or to cause remorse;" far from it. But I have to regret that he should have undertaken such extensive and costly experiments in a manner to prove nothing for or against the celebrated theory.

New Philadelphia, O.

For the American Bee Journal.

Cause and Prevention of Dysentery.

WM. H. BALCH.

I am well aware that this is a delicate subject to handle. I do not write to start a controversy, nor to wound any one's feelings, but simply to give facts that came under my observation from actual experiments, with some truths that have been brought to light by others that have been experimenting and studying the cause of the great mortality of bees during the winter and spring.

I have often said that it is no trouble to winter bees until about March 1, or even to April, and then before June to lose ¾ or more.

The cause of dysentery in bees has been discussed until it would seem that there was not a feature left that had not been examined on all sides, in the light of science, theory, practice and experiment. To enumerate all my experiments is unnecessary. From all that I can gather, the cause is indigestion; but indigestion is not the primary cause; there are many causes behind this, that lead to indigestion of the food. The one great cause behind this is prostration, partially or wholly of the digestive organs or nervous system. What brings on this prostration in summer?

Close up a hive of bees that are in a normal condition for 3 or 4 days, and leave them exposed to the sun and light, although they may have ventilation sufficient, yet the excitement so prostrates their nervous system that many are found dead the first day, while on the 3d or 4th day, dysentery is sure to be developed. One asks: "How is it that my bees wintered well out-of-doors, packed in straw, chaff, or whatever it may be, and yet dwindled and died with bodies distended?" The bees were exposed to changes of weather; had to move their stores at times into the brood-nest. But, you may say, "They did not rear brood until spring." But the handling of cold honey has the effect to wear out the nervous system; the load of food to keep up the required warmth while thus engaged, and the extra labor of preparing food for the larvæ, and before it matures, the parental bee has succumbed to the plague. We often find brood in all stages, or, perhaps, three or more combs, and the hive depopulated.

But some say, it was old bees; yes, but how was it with A. C. Balch's bees, of Kalamazoo, Mich.? They were put into an underground repository 10 days after it was finished, it being laid up with stone mortar; 10x16 feet, and 60 or 70 hives of bees in it, the entrances to the hives contracted to $\frac{3}{8}$x4 inches; the cellar with only upward ventilation, and small at that; the ceiling over-head dripping with water, given off from the newly-made walls! These bees were placed there in November, and taken out in April, in good condition, while his neighbor's bees were in very bad condition! His hives had no upward ventilation, and but little below; his cellar was small with no lower ventilation; there was no draft; the walls, being new, not only gave off moisture, but heat; the humidity of the atmosphere of this bee repository "acting like the clouds of a cold December night," although the thermometer may indicate freezing, or even colder, without their presence, yet let them cover the horizon and how soon the mercury rises, although they are three miles above our heads? This enabled the bees to spread over their winter stores, to keep them warm and dry during their winter confinement. Being warm they consumed less honey, and were quieter; neither their digestive organs nor their nervous system having been over-taxed, what could we expect but health? See BEE JOURNAL for 1884, page 6.

Hear what one of our best bee men says on page 11: "From June 3 to June 28, 156 swarms issued from 150 colonies, all that was in the yard. Will any one say that they were not well wintered? And yet hundreds of bee-keepers will raise their hands in horror when told that this lot of bees were wintered in a temperature from 65° to 90° of heat." Further on he says: "I do not agree with Mr. Heddon in regard to pollen and dysentery. Keep the bees warm, and they can eat all the pollen they care to, and unless some of them get to breeding, you will see no signs of dysentery, and then it will be on the outside of the hive, and does no harm."

I will give but one of the many instances that have come under my own notice: During the summer of 1875, 4 second swarms persisted in coming out after they were put back into the old colony from whence they came; well knowing it would be doubtful about comb honey if they were separated from the old colony, and persist in setting up for themselves, I thought I would experiment with them. So I partially filled a full set of honey-boxes with comb and placed them on the top of the empty frames of a Langstroth hive, and then hived them. The bees filled the boxes and commenced to work in them first; when the honey season closed the boxes were filled, but the hives had but little comb and but little honey, and that mostly unsealed. I took off the boxes of honey and placed the hives in a warm repository. All came through in fair condition.

These experiments with many others show me conclusively that if bees are kept in a warm condition, without excitement, so that they will not wear themselves out with over-eating or worry, it matters not so much about pollen or honey; therefore, whenever we decide to winter, be sure that they are not only warm themselves, but that their stores are warm also. This is the reason that bees, placed on solid frames of honey, with their hives reduced to the size of the colony with division-boards, and the hives well-packed by some warm material, winter better than those without protection on the summer stands.

Oran, N. Y.

For the American Bee Journal.

My Management and Honey Crop.

CHARLES MITCHELL.

I commenced the honey season with 39 colonies, 3 being very weak, and, in consequence, they gave very little honey; but I think it bad policy to injure good, strong colonies by taking brood from them to build up weak ones, so I left them as they were. I applied all my labor and skill to my bees, so as to have them all producers instead of consumers of honey.

From the condition of my bees in the spring, I expected to take 4,000 lbs. of extracted honey, and find now I made a mistake, but this time on the right side of the ledger. For a few weeks I got all the physical exercise, and a little more than was conducive to sound sleep. After everything was full, I had to get barrel after barrel, and work, after night, scalding and waxing them, and putting foundation into frames. I do not recommend bee-keeping as an occupation for lazy people, or those incapacitated for hard work, when requested. I had 6,500 lbs. of honey, and an increase of 42, but I was still behind with my work. I could have taken 1,000 lbs. more, many of the hives weighing from 58 to 80 lbs. I wish to know the largest yield from one colony, left just as it came out in spring, no feeding, doubling or strengthening by brood from other colonies.

My best colony swarmed on June 12, and this threw off another in August. I hived this last swarm on old combs, and in two days it gathered 57 lbs.; no guesswork about it. The honey was weighed, and there is plenty of proof, if it is required. From the old colony and these two swarms, I extracted 612 lbs., leaving the upper stories still to be extracted, and these would have run it up to 700 pounds. Reckoning the honey at 15 cts. per lb., and the two swarms at $6.00 each, the net proceeds from one colony was $103.80. That colony has always proved to be extra good for honey-gathering. If it winters well, I shall make good use of its queens next year. The income from my 39 colonies is $1,215.00. Of course this looks well on paper, but beginners had better go slow, for it takes good muscle and keen intellect to compete in bee-keeping.

Molesworth, Ont.

For the American Bee Journal.

Creating a Market for Honey.

H. D. EDWARDS.

The question of the most importance to the practical bee-keeper of to-day is, "How and where can I find ready sale for my honey at remunerative prices." This question, it seems to me, should interest bee keepers more than—"Which is the best race of bees?" "The best hive," "How to winter successfully?" and many other questions of like nature, which are all proper questions, and need discussion; but the disposition and sale of our honey after we have produced it, it seems to me, is a question that takes precedence of any of the others mentioned. For, what will it avail us if after we get the best bees, the best hive, and have learned to winter successfully, if we are unable to dispose of our honey at prices that will justify us in producing it.

What we want now is a greater consumption of honey. Where one family uses it now we want ten; and where ten families use glucose now we want only one. When we can bring about such a state of affairs we will find a ready sale for our honey. I have been observing, for sometime, the consumption of glucose by the people in the shape of syrups. They come into the stores and buy it by the jug full, and by the five and ten gallons at a time; and seem to eat it with a relish, and claim they think it not unhealthy. Sometimes we find a man that says he does not use glucose, but takes his in New Orleans molasses, forgetting, or rather not knowing that all New Orleans syrups are largely adulterated with glucose.

Some three years ago we were engaged in the grocery business, and sent by a friend, who was going South with stock, for several barrels of pure New Orleans molasses. The gentleman we sent by traveled among the sugar plantations selling stock. After being there some time he wrote us he was unable to find a pure article, either in New Orleans or in the country. He said the planters bought the glucose and hauled it out on their plantations and mixed it with their molasses; and he said the merchants told him that if a lot of pure molasses came into the city it was adulterated before it was sent out. He said the boat he went down on had on board 600 barrels of glucose consigned to New Orleans.

Look at the quotations of honey in the different cities to-day. "Honey dull and of slow sale" is what usually greets our eye. While there are some localities where the home market is good, the field is not yet fully occupied, and the producer may expect ere long to see others engaged in the business, induced, no doubt, by the ready sale of honey in their vicinity and the reports of enormous yields of honey published by some of our bee-keepers. If some of our honey producers were as ready to report their small yields as well as their exceptionally large ones, those about to engage in the business would have a better idea of the profits they could expect. The home market is undoubtedly the best, and is the one to cultivate. Every inducement should be held out for the people to use honey instead of glucose, as it is much healthier, and, therefore, conduces to their welfare, and at the same time increases the sales of honey. Comb honey should be put on the market only in attractive packages, and kept on sale the year round.

We should be very careful of our extracted honey, put nothing on the market but what is fully ripened and is first-class in every respect; put nothing on the market which you are ashamed to put your name on, for if there is anything the matter with it they will say at once it is adulterated with glucose, for which they seem to have a holy horror when mixed with honey, but in syrups they eat it without even a protest.

Delhi, Ill.

For the American Bee Journal.

The Last Number of the Bee Journal.

W. Z. HUTCHINSON.

About once a week I feel like writing an article with the above heading. The JOURNAL of Feb. 20 was especially good.

When I asserted that, in my opinion, the almost abnormal prolificness of the Syrians was an undesirable characteristic, especially when kept for honey-producing purposes, I believed that I was making a truthful assertion; but I expect that my views would be strongly opposed, but when I find such men as Messrs. Doolittle, Heddon, Poppleton and Davis giving testimony in support of my views, I feel that, should there be any controversy upon the subject, I shall not be left to defend single-handed what I believe to be the truth.

Another thing pleases me, and that is the frank and honest manner in which W. T. Stewart "owns up" that reversible frames are not exactly what they have been "cracked up to be." If I understand the matter, there are two desirable features claimed for reversible frames. First, by reversal the bees will fasten the combs to the bottom bars, and if any honey is stored along underneath the top-bars the bees will remove the honey to the section boxes. Now, by using wired frames the first desirable feature is rendered "null and void;" while in regard to the second point, would it not be much more desirable to employ such a method of management that the honey would be stored in the sections in the first place? If reversible frames were a very desirable thing, I think a reversible hive would be still more desirable.

In reference to Mr. Ackerman's article on "The hive I like and use," as I have used both the Simplicity and the Langstroth hives, I cannot resist the temptation to "say something." This beveling of the upper and lower edges of the hives (to which Mr. Heddon objects, and of which Mr. Ackerman approves) looks nice on paper, but no one who has ever tried the simple square joints by the side of the "telescopic" will ever think of adopting the latter. The thin edges of these beveled joints are easily broken off; this breaking often being done in prying off the upper stories. I believe that some one has told us how to make a sort of hinged lever with which to pry off the upper story, one end of the lever being inserted in the "handle hole" in the upper story, while the lower end of the support in which the lever turns is inserted in the "handle hole" of the lower story; but who wants to carry a "wagon jack" around with him when opening hives. Hives that go together with "telescopic" joints afford much better facilities for the bees to use propolis than those with plain, square joints. Mr. Ackerman says that the telescopic joint more effectually protects the hive and bees from the inclemency of the weather. How can this be? The square joint certainly fits as closely, and there is no colony strong enough to require an upper story that does not immediately proceed to stop all cracks as soon as it is added.

Mr. Ackerman does "misunderstand" the latter part of Mr. Heddon's article, in which he (Heddon) quotes from the specifications of the Langstroth patent. If Mr. Ackerman will re-read that quotation, and read it carefully, I think he will find there nothing even remotely touching upon a "dead-air space or double covering over the surplus room." Could I be induced to use wide frames, I should use them exactly as Mr. Ackerman recommends, only one tier of sections high.

Mr. Ackerman advocates 10 frame hives, and then division-boards to make them smaller. Why not make them the right size in the first place, and thus avoid the expense of division-boards? Had hives been made small enough so that ordinary queens could keep them full of brood, reversible frames would probably never have been thought of. The only reason that he gives for using 10 frames instead of 8 is that "side storing" can be indulged in. I wonder how much more writing and talking and "pounding" must be done before bee-keepers will give up that expensive luxury, if luxury it can be called, side storing.

Mr. Buchanan's remarks in regard to the light in which, or rather the suspicion with which many people regard extracted honey, and his suggestions as to the advisability of bee-keepers turning their attention to the production of comb honey, reminds me that, perhaps, it would be well to be a little more careful in "booming," through the agricultural press, the "feeding back" question. Let the public be once led to believe that extracted honey can be "fed back" at a profit, and comb honey will be viewed with as much suspicion as was ever extracted honey. That "scientific pleasantry" of Wiley's only needs some such corroborative testimony to be believed more universally than ever.

Rogersville, Mich.

For the American Bee Journal.

Foul Brood in the Mails.

W. H. STEWART.

On page 524 of the BEE JOURNAL for 1883, Prof. T. J. Burrill proposes to make a thorough examination of the subject of foul brood, its cause and cure, etc., asking for specimens and information as to the nature and violence of the disease, to be sent to him by mail. And on page 611 he says: "That several packages have already been received by him; and one sent in a pasteboard box, shows indications of being genuine foul brood."

I would most heartily thank Prof. B. for offering to investigate the unfortunate matter of foul brood among bees, and hope that he may be encouraged by all bee-keepers when the matter is conducted in a proper manner, but I would most earnestly protest against any specimens being sent him by mail at any time. I have read carefully what I could get on the subject of foul brood, and as yet I can get no satisfactory proof that those who have had the most experience with the disease know to a certainty in how many ways it may be conveyed from one colony to another. It is the opinion of some that it may be carried by bees that carry honey from an infected hive to their own. If this be so, then it would seem that the spores are on the honey combs, scattered all through the infected colony, and robber bees may get them on their feet or tongues and unwittingly carry them home.

While these poison germs are so small and easily carried about and left on whatever they touch, is it not reasonable to conclude that bees having them on their feet or other parts would, on visiting flowers, leave the contagion to be taken up by other bees that visit the same flowers afterward? And in this way alone, bees working on buckwheat, would soon scatter it far and wide. This shows how careful we should be to give it no possible chance to come to our apiaries.

Let us suppose that Mr. A. is putting up some foul brood for the mail bags. He, of course, handles it with his fingers, and it is reasonable to suppose that many of the germs would adhere to the fingers, and that more or less of them would be left on the outer surface of the box, and if an envelope were put over the box by the same fingers, the effect would be the same; and, on being shipped in the mail bags, those spores would be left not only on letters and papers, but if a queen-cage was in the bag with the foul brood, the germs of foul brood would be liable to be attached to the cage, and there wait patiently for some unsuspecting bee-keeper to take the cage in his hands and introduce his new queen to a nice colony, fasten the cage on a comb, and leave the seeds of death to bud and blossom. Then, perhaps, he opens a hive or two more, handles the combs, and leaves a germ or two, and the work is done, or soon will be. If no queen-cage is in the bag with the foul brood, there are letters that may convey the germs to the fingers of the bee-keeper just as easily as would a queen-cage.

The pasteboard box that Prof. B. received, containing the diseased brood, might have been crushed, and the comb left in small fragments all over the inside of the bag and on all its contents, and if a hive is unsafe, after containing foul brood until it has been boiled or burned, how could this mail bag ever be cleansed to safely ship queens in?

Again, this pasteboard box was marked "cobalt." Whoever put up this package, felt conscious that it was improper to put such a thing in the mail, and, hence, used deception, and marked it "cobalt." I hold that every person mailing things of like nature, should be required to label the package correctly, and give his name and place of residence.

I would ask bee-keepers to give this matter serious consideration, and give their conclusions through all the bee papers. Is there a bee-keeper who would like to take a queen-cage from the mail bag that he knew contained one or more packages of foul brood, and put that cage and queen with his bees if they were in a healthy and prosperous condition? We cannot afford to be careless in regard to this matter.

Orion, Wis.

For the American Bee Journal.

Marketing Honey in the South.

M. T. HEWES.

Bees are kept in Langstroth, Van Deusen, Simplicity and Dixie hives. The Dixie is, I believe, only to be found in Louisiana. It is like the Langstroth hive, but is made of various sizes, so that one often sees hives holding from 8 to 14 frames and all called Dixie. The frames are of the Langstroth size, but the top and bottom bars are made an inch thick, which is an advantage as they never bend, no matter how heavy a load of honey they are called upon to sustain. They hang upon wooden rabbets, and are suspended by four-penny nails, one in either end of the top-bar, instead of having the top-bar lap over as in the Langstroth frames. This is a great disadvantage as the nails are continually coming out. We pile on stories 3 or 4 high; I have frequently seen 48 frames in one hive; 36 of these will be filled every week during the extracting season, the other 12 are left in the brood-chamber.

We extract our honey as fast as possible through the entire season, which sometimes lasts from May 5 to September; generally, however, things are not in working order until June 10, and everything closed up for the winter by Aug. 25. The honey is run into Cyprus barrels directly from the extractor. As there is a continual honey flow during the season, it is impossible to separate the different kinds of honey; so in one barrel of 45 gallons there may be a dozen different flavors, and as it is in different stages of ripeness (or rather greenness), one can easily see that it will not bring very much in the market. Most of the honey is shipped to St. Louis and Cincinnati by boat; and, in the hands of commission merchants, bring from 6½ to 9 cents, according to the season. Some of the merchants know about as much about honey as "the man in the moon;" in point of fact, one of our largest apiarists was creditably informed by them that his honey was half cane juice; this in the month of July, when sugar cane is not large enough to yield one barrel of juice per acre. But does not every one know that should cane juice be mixed with honey, the entire contents of the barrel would turn to vinegar long before it reached its destinatton.

New Roads, La.

For the American Bee Journal.

At What Age do Bees Gather Honey?

N. M. CARPENTER.

On page 308 of Vol. 19 of the BEE JOURNAL, is an article under the above heading from G. M. Doolittle. It will be remembered that according to his experiments a young bee does not gather honey until it is 16 days old. I was surprised at the results of his experiments, as I had come to the conclusion, many years ago, that in about 30 days from the laying of the egg, a young bee would be gathering honey, if there was a good yield.

As I received some very fine yellow Italian queens from a breeder in Maryland a few days after reading Mr. Doolittle's article, I thought I would make some similar experiments, to see what the results would be with me. Consequently I introduced a fine yellow queen into a colony of native bees. In about 48 hours afterwards, the queen began to lay vigorously, and in 21 days thereafter, the little "yellow boys" were hatching out of the cells in great numbers. In 5 days more some of these young yellow bees brought little pellets of pollen; and when 7 days old, I found by crushing them as they dropped upon the alighting board, that quite a proportion of them had their sacs filled with honey. When 9 days old they were gathering honey as freely as any in the hive, and came as well-laden as the older bees.

There was no possibility of a mistake in the matter, for before the hatching of brood from the new Italian queen, not a yellow bee could be found in the hive. In fact, most of my bees are of the common kind, and the colony experimented with was especially free from any yellow-banded or hybrid bees.

This experiment was made during an abundant honey yield from basswood. In such a case undoubtedly bees would work much younger than when the honey flow was less. In our spring management this question becomes of some importance, as we would like to know about when the young bees, which we have taken so much pains to increase by spreading brood, etc., will be ready to go to work for us.

Ellington, N. Y.

For the American Bee Journal.

How to Make Bee Gloves, etc.

MISS H. F. BULLER.

I promised some time ago to tell the readers of the BEE JOURNAL the way I preserve mine without going to the expense of having them bound. After arranging each month in the proper order, I take a strong piece of brown paper for a cover and a strip of stout cotton about 2 inches wide which I fold over the back to prevent the stitches tearing out; then with a fine awl pierce half a dozen holes through all, and sew them firmly together. I then write the month and date on the cover, so that I need lose no time in hunting up the numbers I wish to refer to.

For the benefit of my sister bee-keepers, who, like myself, are so constituted that they cannot work amongst bees with bare hands, I will tell how I make my gloves. I take a piece of strong unbleached linen jean, which wears well, for the outside, and for lining, use canton flannel with the fluff next to the hand. Cut them after the pattern of the gloves used in Canada for binding grain with thistles in it. Dipping the gloves in cold water keeps the hands cool, and the bees will not readily sting through the wet gloves. I find that by having the finger and thumb fit snugly, I can work in them very well.

Campbellford, Ont.

For the American Bee Journal.

The Outlook for 1884.

REV. L. JOHNSON.

Although the past winter has been one of the severest ever experienced in Kentucky, yet our loss of bees, so far, has been quite small. I attribute this to our excellent and abundant crop of honey last year. The fall was quite dry, and consequently but little pollen was gathered in late. The spring pollen, mostly at the bottom of cells, was covered with honey, and no molding and rotting of pollen took place to cause dysentery. I hold that if pollen is pure and sound, even if eaten by the bees in their long confinement, it will do them no harm. But on the other hand, if either honey or pollen is impure, or in a decaying state, they will have a deleterious effect on bees in winter. This, to me, is the whole theory of the dreaded dysentery in bees. Bees are, therefore, both strong in numbers and in fine condition, so far as have been ascertained.

As the ground was covered with snow in the coldest weather, our clovers have been but little injured. White clover looks thrifty and strong. As we had but little fruit last year, we will have an abundant bloom in the spring, although peaches and the more tender varieties of cherries are killed.

Altogether the outlook for the Kentucky bee-keepers is quite encouraging, and those who will give their bees timely attention, will again realize the happy results of 1883. Last fall, at the suggestion of Mr. J. T. Connelly, of Walnut Lick, Ky., I used corn silks for packing over the bees, and after a fair trial, I pronounce them superior to any thing I have yet tried. They are clean, sweet, and remain perfectly dry at all times. As non-conductors they are far ahead of chaff, and hereafter I shall use nothing else.

Walton, Ky.

For the American Bee Journal.

Feeding Bees in Winter.

R. H. SMITH.

Now and again I see in the BEE JOURNAL inquiries about feeding bees in winter. Of course it should not have to be done, as a rule, but sometimes circumstances compel us to do that, or lose our bees. I saw a paragraph in a paper lately where the writer said he would rather let his bees die in peace than disturb them by feeding in the winter. That I cannot agree with.

Last winter I purchased 3 colonies in box hives; one was strong, one weak, and one very weak. The first week in March I brought them home, a distance of 16 miles, over a rough road. On examining them I found No. 1 had plenty of stores, No. 2 was weak in bees and had little honey, No. 3 had all but died of starvation. The strong one I set into the cellar, out of which it came in fine condition about the end of April. I removed the bottom-board from No. 2, turned the hive upside down and laid a cake of candy on the cross sticks of the hive (the combs were only built half way down), laid the quilt and cushion over them and set them away, with little hope of their living until spring. When I set them out, the last week in April, I again examined them, and found brood in all stages. They were more advanced than some of the strong colonies. No. 3 seemed a hopeless case, but I made a little hive capable of holding three section boxes, transferred the few bees and queen into that, fed them honey and candy, and found them also alive at the end of April. I set them out in the hot sun; they swarmed out and that was the end of them.

This fall I rescued 3 colonies from the brimstone pit too late to feed them sufficient syrup to winter on, so on the first of January I commenced feeding them candy. I laid them away prepared for this feeding, and had no trouble in doing so. I put the candy on two sticks laid across the frames, without disturbing them, and trusted to their finding it.

A few days ago I made another supply, and on opening the first hive I found the cake eaten out and only a shell left; inside this shell the bees were feeding quietly, and took no notice of the light held over them. I gave them a second cake and again tucked them up comfortably. There are no signs of dysentery, and they are perfectly quiet.

I make the candy as follows: To 4 pounds of granulated sugar add one of water, boil till thoroughly melted; while cooling, stir in enough sugar to make a mush, pour into moulds and let it harden, when it is ready for use. For a mould I take a section box, set it in a pan, lay a paper in the bottom and pour in the partly cooled candy; when it sets, I take off the section box and set away the cake till it is wanted. I warm it a little before feeding. Be sure not to burn the sugar.

Falkenburg, Ont.

For the American Bee Journal.

The New Races of Bees.

L. R. JACKSON.

It has been a mystery to me why some who I thought competent to judge of the good and bad qualities of bees, differed in their opinion of the Syrian bees from what my experience has caused me to think of them.

Mr. Benton's article, on page 38 of the BEE JOURNAL, gives new light on this subject, and is just what we needed. As Mr. Newman remarks, they are all Syrian bees, yet that does not hinder there being a difference in the bees south of the mountains, from those on the north. If there is a difference, we should know it, and who is as well qualified to draw the line as Mr. Benton? If we know the bees south of the mountain as Holy Land, and those north as Syrians, then we know what we are buying. If we call them all Syrians, we know not what we buy until we test them.

I have a few colonies of Syrian bees, and I think they have more good qualities and less bad ones than any bees I have handled. They can be handled more easily than the Italians, and one is not as liable to be stung with them as with the Italians. They are more easily brushed from the comb and fly about less than any bees I have worked with. They gather a surplus of honey and keep strong longer at the close of the honey harvest than any bees I have, and if any of the bees have not honey enough to winter on, the Syrians are the first I call on for help.

I have crossed a few Syrian queens with Italian drones, and a few with the brown German drones, and will test them this year, and still cross the blood of the three races further. I do not believe that "the coming bee" will be a pure one of any race. The best bees I have, except the Syrians, are a cross between the Italians and brown Germans.

I winter my bees on the summer stands, and the Syrians are the quietest during the winter, and are wintering well, though the thermometer has marked 28° below zero.

Urmeyville, Ind.

Convention Notices.

☞ We will organize a bee-keepers' association at the Court House in Franklin, Ind., at 10 a. m., April 5, 1884. All bee-keepers are invited to attend and take part in the organization. L. R. JACKSON.
Urmeyville, Ind., Feb. 26, 1884.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.
C. M. CRANDALL, *Sec.*

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.
WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

☞ The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.
O. J. TERRELL, *Sec.*
North Ridgeville, O.

☞ We intend to organize a bee-keepers' association for Southern Indiana on March 20, 1884, to meet at the Merchants and Manufacturers' Club Rooms, Madison, Ind., at 9:30 a. m. Kentucky bee-keepers are invited to participate. H. C. WHITE.

☞ The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest, for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twichell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."
C. M. CRANDALL, *Sec.*
Independence, Mo.
H. SCOVELL, *Pres.* Columbus, Kans.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Excessive Swarming.

In the spring of 1883 I bought 2 colonies of black bees. When swarming time came I found that I had my hands full of business. I knew just enough about bees to know how to get a swarm into a hive, but one colony seemed to have the swarming fever, for it swarmed six times in the month of June (three times in one week), and twice in one day. Now, where there is such an effect, there must be a cause. What is it?

J. A. King.

Rochester, Minnesota.

Answer.—Such excessive swarming usually happens under the following conditions: 1. The old colony is very strong. 2. A part of its prime swarm returns to the parent colony. 3. The same thing takes place with some of its second swarms. 4. The second swarms are not large. 5. Often a swarm comes along, or from some other hive in the apiary, and, unnoticed, enters the old colony. We know of no cause which can produce the following effect: That one bushel of bees can be divided into six parts, and each part will contain a bushel and a half of bees. *Ex nihilo nihil fit.*

A Curious Freak of Bees.

One colony swarmed out on Nov. 6, and settled in two clusters near each other. I was looking them over, to find the queen, not thinking that there were two. As they crawled back and forth from each cluster, I saw they had balled a queen. I threw the ball into some water near by; when released I caged the queen, intending to clip her wings and put her back, as they had plenty of honey. I got my swarming box, in which to gather the bees, when I discovered that they had another queen balled. I released her in the same way, but they had wounded her so that she soon died. I then gathered the bees, looking all the time for another queen, but I found none. I put them back where they came from, with a caged queen over the cluster or centre of the hive, and spread a piece of carpet over them. In three days I opened the cage gently, let her come out, and the bees met her, and seemed satisfied. After a while more came around, and one seized her and they commenced to fight her. I caged her again with some bees still holding her. I smoked them till they released her, and left her in a cage for seven days. Then let her out gently, on the top of the frames; she started down, when some unfriendly bees met her and seized her, and I caged her again. I looked them over three times for another queen, but found none. I then moved the hive away and put another in its place. I then brushed the bees all off in the hive, and put frames in the new hive, on the old stand. I looked them over carefully, let them fly back to the other hive, but I found no queen. It was a warm day, and I let them take their time to return. I had liberated the queen in the new hive. When the bees had nearly all gone to their new home, I looked in, to see if the queen was received or not. To my utter surprise, I found her again balled. I released and caged her; as she did not appear hurt in any way, may it not be a friendly balling, to keep her out of danger's way. Did Mr. Heddon tell us why she was balled?

G. W. Ashby.

Valley Station, Ky.

Answer.—Your case acts like the clustering of bees from different colonies, when some bees are antagonistic to every queen in the cluster, even if there be a dozen. It is seldom that they hold their malice so long a time. I do not think the "ballers" had any feelings of friendship toward the balled queen. She was, in my opinion, all the time balled by hating bees of no relation.

Lime to Prevent Dampness.

Has dampness in hives ever been prevented by the use of fresh-burnt lime being stored in the bee cellar? As it absorbs water from the atmosphere, would it not also from the hives? or would the resulting gases prove deterious to the bees?

S. Rufus Mason.

Purple Cane, Neb., Feb. 25, 1884.

Answer.—Lime has been used in repositories for bees, both in and out of the hives, but it has not yet come into general use, nor do I think it ever will. It is by no means settled, that dampness has much to do with the loss of bees in winter. You will find, however, that repositories are much drier than out-door air during the winter, even where streams of water pass through them.

Lifeless Bees.

There are only two apiaries of Italian bees in this section of Pennsylvania (my own and a friend's), and we have Italianized ours since June 15, 1883. My own only averages 10 lbs. of comb honey per colony. The spring opened cold and rainy, and I transferred mine from box hives to frames, and gave them Italian queens, so they have not had a chance, but I will state that after all, that one of my colonies gave me over 30 lbs. of comb honey, but none of my colonies stored any surplus after Aug. 1; it was so dry after that until frost killed all the flowers. The buckwheat and fall flowers yielded but little honey. A neighbor of mine stated he has had an average of 50 lbs. to the colony; a good yield for the season, but I think the average for this section will not run over 15 lbs, per colony. My hives are all tucked up for winter in forest leaves, and I hope, next year, to report a better yield, as I shall use one and two pound sections instead of two and five pound boxes, as I used last year. I purchased my queens from D. A. Pike; they are very prolific queens, and the bees are good honey gatherers. I have a strong colony of bees, and they are well tucked up for winter. We had on Nov. 14 to 16 cold weather for the time of year, the mercury went down to 14° above zero; and, on looking on the foreboard of this hive, I saw several bees apparently dead. After being brought in a warm room, I found they came to life, so that lead me to think something was wrong, so I made an examination next day (it being a little warm), and I found the bottom-board covered with bees, not dead, but just able to crawl about, also, all through the hive it seems as if they had no life in them, but after they were warmed up in the sun they seemed to be all right, only they, or some of them, would crawl out and fall on the ground, and the other bees would pull some out, in the same condition. For 2 or 3 days, the weather being warm, I found they had plenty of good sealed honey within easy access at any time, and plenty of bees for the space they occupy, but I cannot account for this lifeless condition at the time mentioned. I found a little moisture in the hive; they had a honey-board over them, with a thick pad over that, with a packing of leaves over that. Please tell me the cause of this condition, and dwindling so early in the season.

Fallsington, Pa. J. E.

Answer.—I can give no solution to the above case, except that possibly there might be some poisonous or stupefying honey in the hive. It is entirely unlike any thing I have ever seen.

Spring Management.

Bees brought in pollen on the 13th, but since that, it has been raining, or cloudy and cool, nearly every day; but to-day it promises to be clear and pleasant, and already they are beginning to fly at 8 a. m. Last season was a failure in the honey crop here. From 100 colonies, spring count, I only got about 1,500 lbs. of comb honey. Increased to 155, and put into winter quarters 152 (on summer stands); lost 2, leaving now 150 in fine condition. If spring dwindling should not be too bad, they will be strong at the opening of spring. I desire to use one-pound sections this year. My hives are Langstroth 2-story; would it be best to leave off the honey board when the one one-pound sections are used? Will the use of these sections prevent swarming, if put on in time?

Kenton, Tenn. J. W. Howell.

Answer.—It would depend entirely upon the style of the honey board you use. If it is like our skeleton honey board, by all means we should leave it on. If of the style of the old Langstroth, we should be sure to take it off. Plenty of comb-surplus-room has a tendency to prevent swarming. Plenty of extracting-surplus-room (that is, empty combs), exerts a still greater tendency; but in some localities in certain seasons, bees will swarm excessively for all of these.

Double-Walled Hives, etc.

A friend asks privately for an answer through this department in regard to my opinion of double-walled hives for protecting the bees against heat in the summer. In this I agree with Mr. Cheeney in the BEE JOURNAL of Dec. 19, 1883, page 659, and not with J. E. Pond, as contained on page 154, present volume. If the sun was allowed to strike a hive during the heat of summer, the double-wall would have a tendency to equalize the heat between night and day, but where hives are shaded, as all should be, the thinest wall hive is cooler than any double-wall. No matter what may be the outside temperature, the presence of animal life will raise that temperature if it can exist within it. Mr. Cheeney is also correct in saying that "the dead air space will contain a higher temperature than the air outside," if shaded. Mr. Pond says scientific men tell us that "dead air is an almost perfect non-conductor of heat and cold." True scientists never speak in this manner. There is no such thing as cold. We mean only a condition indicating the absence of heat; hence, nothing is a conductor or non-conductor of cold. If bees were in a hive that was a perfect conductor of their heat, and admitted of no circulation of their heat outward, the combs would soon melt down, place the hive where you might. When the outside temperature is cooler than that needed by the bees, the non-conducting wall is good for them the same as before, it preserves their heat, raising the temperature.

Another inquirer asks if foul brood would be propagated by the introduction of queens from foul-broody colonies? As I have before said, I have no experience with foul brood, but I think if the accompanying workers and cage were burned or buried, and the queen introduced in a cage in which she was kept for a few hours, until the honey in her stomach was all digested, that no foul brood would be disseminated. Whether I am correct or not, I would urge upon all, the expediency of this practice in these days of the alarming spread of foul brood. I will reply to Bro. Pond's article on page 149, as soon as time and space will permit.

SELECTIONS FROM OUR LETTER BOX

Bees all right yet.

The winter has been very cold here. The mercury having been as low as 30° below zero a good many times, and was this morning, Feb. 29. My bees have been buried under the snow all winter, packed in sawdust. I examined lately, and found them all right yet. I hope for an early spring, but every thing bids fair for plenty of cold weather yet. I have just received a Heddon hive for comb and extracted honey, and I think it is the easiest hive to manipulate that I have yet seen, and the sections are the nicest I ever saw, nearly as white as snow. I think any person having one colony of bees ought to take the Weekly BEE JOURNAL; it will pay them twice over in the extra amount of honey that they would get, by following its teachings.

G. L. PRAY.

Petoskey, Mich., Feb. 29, 1884.

Straw Bee Hive.

EDITOR OF BEE JOURNAL.—I send to the museum one of my square straw bee hives for Langstroth frames; they can be made for any frame that is in use. The walls of the hive can be made of any thickness desired. You were right when you said, "prepare your bees for a cold winter, and if it is warm it will not harm them." Mine are safe so far, by your advice.

A. HOKE.

Union City, Ind., Feb. 29, 1884.

[The hive is placed in our museum. It is made of straw tied with wire; the straw walls are on the four sides of the brood chamber; the bottom and cap being like a regular Langstroth hive. The end walls of straw have rabbets cut out for the ends of the frames to rest on—the straws standing "up and down" on their ends. Our advice in "preparing the bees for a cold winter," if left on the summer stands, *was* "good and timely," and such should always be done; if it proves to be a warm winter, there is no harm done, and if it should be a cold one, they are ready for it.—ED.]

Temperature of Bee Cellars.

Will Mr. H. S. Hartman please describe through the BEE JOURNAL, how he raises the temperature in his bee cellar from 45° to 50°, as mentioned on page 124? A BEE-KEEPER.

Burgessville, Ont., Feb. 28, 1884.

Drones from Worker Eggs.

In reply to an editorial note on "Drones from worker larvæ," Oct. 31, 1883, I would say that after removing all eggs and brood from a colony and giving them a small piece of comb containing eggs only for queen rearing, I, in due time, found not only queen cells but drone and worker cells also, but as I did not see them again after the queens hatched, I could not say what hatched from them. I also had another case, similar to the above, where I had placed a strip of comb containing eggs between top-bars of frames of a queen-rearing colony; they were nearly all capped over as drones, but, as in the first case, I did not watch the result. I will, however, another season, try the experiment of rearing drones from worker eggs, if it can be done. We are now having the coldest weather of the season, it being 30° below zero at 6 o'clock this morning. What the result will be to our pets (the bees) none dare conjecture. S. J. YOUNGMAN.

Cato, Mich., Feb. 29, 1884.

Planting Honey Trees.

I began bee-keeping in 1880, knowing but little about it. I have met with many losses, yet I am encouraged to continue. I am a carpenter, and make and use the Langstroth hive, except one glass hive of my own make, which has proven to be the best for wintering and increase of bees. That colony sent off 4 large swarms last season; the first on May 26; the other 3 within 12 days; the first swarm sent off 2 swarms; making an increase of 6 from 1, in one season. In 1882, I planted 2 rows of mignonette in my garden; rows 3 feet apart; plants 1½ feet in rows. It made a perfect mat of flowers 6 feet wide, and for 6 weeks (not remembering about the dates) the bees worked on it continually from morning until night. The pollen is red like that of red clover. I think it a profitable plant for bees in this climate. This is a "blue grass" and "white clover" region. Some linden; and after these are gone, there are but few honey plants here in this section.

1. Would it be advisable for a middle aged man to set out 50 or 60 young linden trees this spring, as the older trees are getting scarce? The young trees can be had without cost, except time and labor, from thickets that are being cleared up. Five miles south of me there are none. I have only one grown linden tree on my place; a few more near by, and you cannot pass without noticing the swarms of bees at work on them, while in full bloom.

2. Where can teasel seed be bought, and at what price? They could not be obtained in Louisville in any seed store, in 1882.

3. Would teasel be a profitable honey plant in this climate, clay ground, lime stone country.

Todd's Point, Ky. J. M. PRATT.

[1. All things considered, we think it would pay you to set out the young lindens. In this climate we have nothing better as a shade tree. 2. Probably N. N. Betsinger, Marcellus, N. Y., can supply it. 3. We do not know. Ask Mr. Betsinger.—ED.]

Poorest Honey Crop in Ten Years.

Since Aug. 15 there has been no honey for the bees to gather; even the buckwheat yielded none in consequence of drouth. The white clover was excellent while it was in bloom, which I should have taken advantage of, by means of an extractor. The honey crop of last year was almost a total failure; 22 bee-keepers around here, with over 200 colonies of bees, report less than 2,000 lbs. in all.

Rolla, Mo. WM. ROBSON.

Good Beginning.

In 1882 a stray swarm came to me, and in a few days another came. I hived them and got a third one out of a tree. I wintered the three in the cellar, and in the spring transferred them to chaff hives. I now have 11 colonies in good condition.

JOHN HOOD.

Iron Hill, Iowa, Feb. 28, 1884.

Bees Gathering Honey.

On Feb. 1 my bees commenced to bring in honey from the soft maples and elms, of which there are many here. My bees wintered without loss, except 2 or 3 that were robbed. I got a good crop last year. From 97 colonies in the spring, I got about 20,000 lbs. (600 lbs. in the comb, the rest extracted), and they increased to 160 good colonies. I like natural swarming for increase, but increase as little as possible when honey is my object. Many are engaging in the bee business here, who expect to make it a specality, and they are going at it in a way to make it a success. Thanks to the indefatigably efforts of Dr. O. M. Blanton, of Greenville, Miss., for much practical instruction and advice. We are all overflowed here, and our bees are on scaffolds, etc. It will be some time before we can overhaul our bees. I expect to see swarms come out before long.

W. G. McLENDON.

Lake Village, Ark., Feb. 27, 1884.

Given Foundation.

Please give me through the BEE JOURNAL the address of some one in our State that I can get to make wax into Given foundation.

GEO. BROWN.

Conesus Centre, N. Y., March 2, 1884.

[We do not know; if there is any one doing so, they will probably advertise in the BEE JOURNAL soon.—ED.]

Foundation with High Side Walls.

We send you some samples of the deepest foundation we have seen yet. It is made on a mill from J. Vandervort, of Laceyville, Pa. It is three-tixteenths of an inch thick, and goes 4 feet to the pound. Such foundation evidently will not need any wiring; 4 sheets of it equal in depth 5 sheets of Dunham. CHAS. DADANT & SON.

Hamilton, Ill., March 4, 1884.

[It is well-made, and the cells are deep enough to satisfy any one.—ED.]

Two Queens in a Hive.

Five days ago Mr. Bryan, an apiarist from Nashville, Tenn., spent a half day with me among the bees. We found all in fine condition with brood hatching rapidly. In ony hive we found a great deal of brood and two fine-looking queens on frames that were close together. We divided the colony, and to-day I examined them, and almost every empty cell contained an egg, showing both to be prolific. There are no drones in the country, and, of course, they wintered together.

J. M. KILLOUGH.

San Marcos, Texas, Feb. 28, 1884.

Bees Getting Uneasy.

It is 22° below zero this morning, with over 2 feet of snow on a level. Bees are getting uneasy in the bee house, but are healthy otherwise.

C. THEILMANN.

Theilmann, Minn., March 4, 1884.

Winter Still with us.

Bees are much weakened by the winter, and are dwindling some, losing heavily. If it remains cold much longer, at least half the bees will be lost. Bees flew too late, shortening the lives of the old bees, and there were no young ones to take their place. Some have died from starvation, not being able to leave the cluster to reach their stores. Some were short of stores, especially late swarms. The fall season was very dry here.

W. MASON.

Fillmore, Ind., March 7, 1884.

Bee-Sting Remedy.

Tobacco wet and bound on, is the best remedy with me, but the sting should be removed as soon as received, cutting it off with a pocket knife, when it will be lifted out, and very little or no swelling will occur.

F. M. CHENEY.

Sutton, N. H., March 3, 1884.

Bees Wintered on Summer Stands.

I put into winter quarters, on the summer stands, 200 colonies, all in good condition except 4 late swarms, which had very little honey. I did not think it would pay to feed up for winter; so they died, and I was not disappointed. I always winter my bees on the summer stands, and I never lost over 10 colonies out of 200, when they were in good condition in the fall. I close the front entrance to about 3 inches, leave the honey boards on, open a few holes on top, spread over a cloth so that the dampness can pass off, and never have any trouble with dysentery in my bees. Bees have been flying a little this month, and gathering some pollen from the maples. I will feed about 12 bushels of rye as soon as it gets warm enough.

H. P. DEAHL.

Berryville, Va., March 4, 1884.

Thermometers.

Will Mr. John Phin, of Cedar Brae, N. J., please answer the following questions through the BEE JOURNAL:

1. Does extreme heat or cold cause the mercury or spirit thermometers to incorrectly register degrees of temperature?

2. Will a thermometer that registers incorrectly by the ice test, run uniformly up and down the scale the same number of degrees that it varies?

3. Will an old tested thermometer, say ten years old, mark the degrees as perfectly as a newly tested one?

4. Which, in your opinion, is the most perfect, spirit or mercury thermometers? MRS. R. E. KNAPP.

Kane City, Pa., March 4, 1884.

[Will Prof. Phin kindly reply to these inquiries?—ED.]

☞ We have a few photographs (cabinet size) just taken, of the Rev. L. L. Langstroth, which we can send to those desiring them for 50 cts. each, postage prepaid.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 10, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & CO.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. BURNETT. 161 South Water St.

KANSAS CITY, MO.

HONEY—This market is now rather quiet, and fairly well supplied with comb honey in all shapes. Prices are a little off, only the choicest white comb either 1 or 2 lb. sections bringing 18c. Last week's report made me say, 1 lb. sections bring "us" more than 2 lb. It should have read, 1 lb. sections bring "no" more than 2 lb. Extracted in fair demand for fall products at 8@8½c; white at 9@9½c.

BEESWAX—None in this market.

JEROME TWICHELL. 514 Walnut Street.

SAN FRANCISCO.

HONEY—Not much choice honey offering, but there is an accumulation of off-lots, which are slow of sale. Prices here are too high to admit of exports to other markets. The outlook for the coming crop is very good. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@--

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH. 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and dull. Comb 12@16c. and strained and extracted 6@8c per lb. Top rates for fancy small packages.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.

BEESWAX—In great demand, but no supply; nominally 30c. per lb.

A. C. KENDEL. 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

☞ The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

For a club of $20, for 10 Weeklies, or an equivalent in Monthlies, we will present, besides the 15 per cent. in books, a tested Italian queen, by mail. postpaid.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

For a club of 100 Weekly (or its equivalent in Monthlies), with $200, we will send a Magnificent Organ worth $150. See description on page 614 of the Weekly for Nov. 28, 1883.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Local Convention Directory.

1884. *Time and place of Meeting.*

March 20.—Southern Indiana, at Madison, Ind.
H. C. White, Sec.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 9.—Ass'n of Central Ills., at Bloomington.
W. B. Lawrence, Sec.

April 9.—Lorain Co., at Elyria, O.
O. J. Terrell Sec., North Ridgeville, O.

April 10.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24, 25.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 3.—Progressive, at Bedford, O.
J. R. Reed, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

MISSING,

From Kenner, La., Fred S. Carrier, who was in the employ of E. T. Flanagan at that place, 16 miles from New Orleans. He left indications of mental derangement, and it is believed that he has either perished, or is wandering among strangers. He was one of Mr. Heddon's last year's students—a bright young man, of then sound mind; about 5 feet 8 inches in height, rather slender built, weight about 140, smooth face, nervous sanguine temperament, eyes bluish gray, hair dark brown. A little peculiarity in his walk was a hitch in the steps, as if there was a stiffness across the small of the back, though he was strong and well, with no such weakness. He was well versed, and very enthusiastic regarding bee-culture. Will any person who may think they have any clue to the whereabouts of the above described person, please report the same to James Heddon, or E. T. Flanagan, Kenner, La ?

BASSWOOD, MAPLE AND ELM TREES, 2 ft. and under, $2 per 100; 2 to 6 ft., $6 per 100; 6 to 10 ft., 10c. each. N. E. DOANE, Pipestone, Mich.
11Dtf

WANTED—A mechanic to assist in apiculture. Wages according to knowledge of both industries. Reference exchanged. Call at this office, or address R. J. ADAMS, Lakeport P. O., Chicot Co. Ark. March 3, 1884. 11A2t

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

SEED CORN!

For ENSILAGE or GREEN Fodder, 15 ft. high. 40 to 60 tons per acre not unusual. Stock eat stalks and all, clean. Sample and price by mail. Dairy goods. Instantaneous Cream Separator. BURRELL & WHITMAN, Little Falls, N Y.

65 *ENGRAVINGS*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

NEW
Vegetables
A
Specialty.
GREGORY'S
SEED
CATALOGUE.
1854.–1884

My Vegetable and Flower Seed Catalogue for 1884, the result of thirty years' experience as a Seed Grower, will be sent free to all who apply. All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. My collection of vegetable Seed, one of the most extensive to be found in any American Catalogue, is a large part of it of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement.

JAMES J. H. GREGORY, Seed Grower, Marblehead, Mass.

BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

30 DAYS' TRIAL

DR. DYE'S

(BEFORE.)

(AFTER.)

ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address

VOLTAIC BELT CO., Marshall, Mich.
6D1y

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
32ABtf J. VANDERVORT, Lacyville, Pa.

BEE-KEEPERS, before ordering your APIARIAN SUPPLIES, Send for our large Illustrated Catalogue, sent free to any address.
10A24t E. KRETCHMER, Coburg, Iowa.

Italian Bees and Queens For Sale!

Send 25 cents (one cent stamps) and get our Book on BEE-KEEPING.
Address E. P. BAKER,
10A8t Box 342, DES MOINES, IOWA.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.
D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Bees for Sale!

One hundred Colonies in Langstroth's Improved two-story Hives, made of good Poplar Lumber, "painted," 10 full frames each, in good condition. Will sell in quantities to suit purchasers. Hives in order on cars. For further particulars apply to or address,

J. W. HOWELL, Kenton, Tenn.
11A2t

ALLEY'S

Drone Excluder, Queen & Drone Trap

COMBINED.

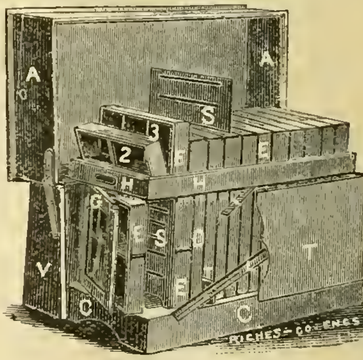
Sample, by mail, 65c.; by express, 50c. In the flat, per dozen, including one made for model (13 in all) $3.00. Those who purchase by mail, can get one dozen in the flat by remitting $2.50 more. Drone Excluder *without Trap*, by mail, 30c.; by express, 20c.; in the flat, not less than one dozen, 15c. each. Send for our 23d annual Circular and Price List of Queens and four races of Bees.

Bee-Keepers' Handy Book, bound in cloth, by mail, $1.00.

HENRY ALLEY,
9Atf WENHAM, Essex Co. MASS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1876. CROWN 1882.



The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, ELVIN ARMSTRONG,
Prop'r. of the Crown Bee Hive Factory and Apiary,
JERSEYVILLE, ILL.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine.
4A1y

For Bees, Queens,

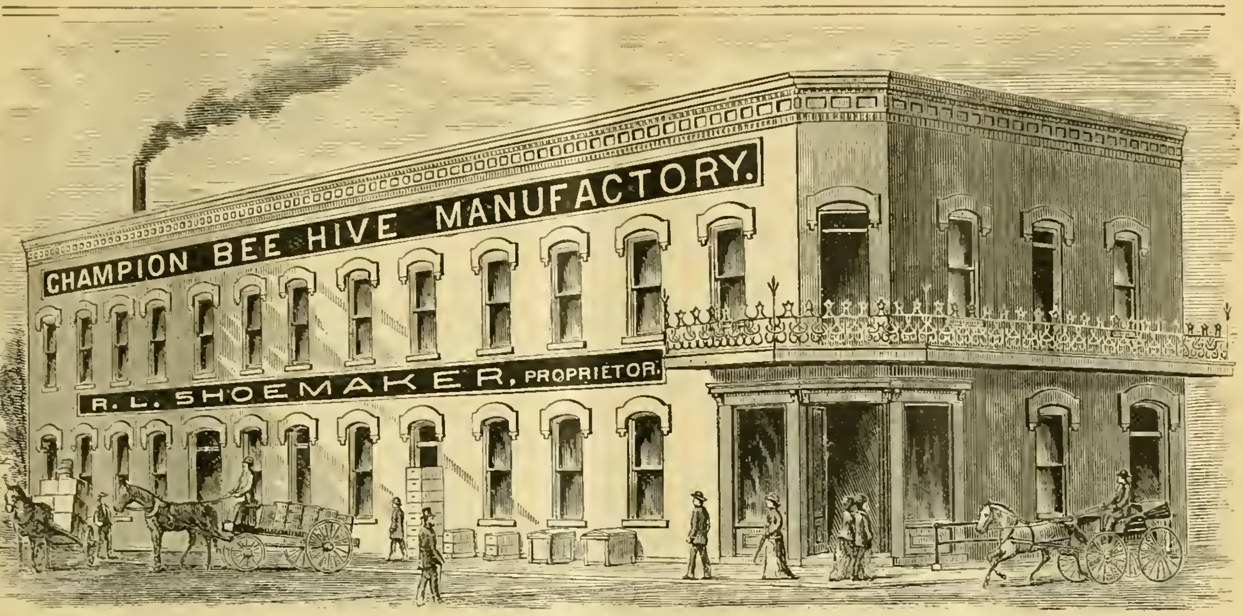
Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

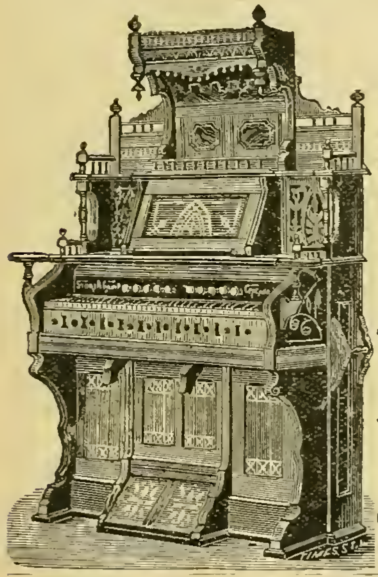
ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. THOMAS G. NEWMAN,
925 West Madison Street Chicago, Ill.


CHAMPION BEE HIVE MANUFACTORY.
R. L. SHOEMAKER, PROPRIETOR.

All Bee-Keepers wanting HIVES OR SECTIONS of any kind, and in any quantity, will confer a favor by sending for my Price List (Price List Free). Direct

CHAMPION BEE HIVE MANUFACTORY.
R. L. SHOEMAKER, Proprietor.
Newcomerstown, Tuscarawas Co. Ohio.



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Manufacturers and Wholesale Dealers in
PIANOS AND ORGANS

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Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.
Write for our prices before buying elsewhere.

STORY & CAMP,
188 & 190 State Street, CHICAGO.
203 N. Fifth Street, ST. LOUIS.

HELLO! HELLO!
We are now ready to Book Orders for
Bee-Keepers' Supplies.
White Poplar Dovetailed **SECTIONS** A Specialty.
Everything fully up with the times. and
At Lowest Figures!
Send stamp for 32-page Catalogue and Samples.
APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

J. W. ECKMAN,
DEALER IN
Pure Italian Bees and Queens
For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

EARLY CHOICE QUEENS
TO BREED FROM,
From April 20th to June 1st. Prices upon application.
HENRY ALLEY,
10A3t WENHAM, Essex Co. MASS.

Palace Bee Hive
And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t H. C. WHITE, MADISON, IND.

A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.
SEND FOR PRICE LIST AND CIRCULAR.
Address, DR. G. L. TINKER,
44Atf NEW PHILADELPHIA, O.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM
COMB FOUNDATION,

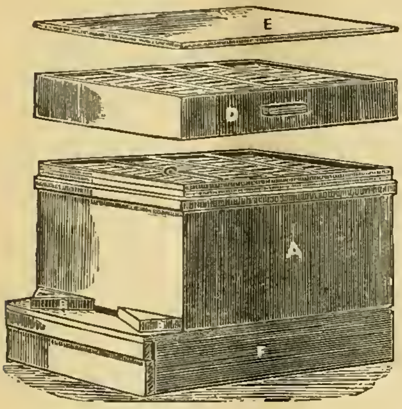
high side-walls, 4 to 16 square feet to the pound. Circular and samples free.
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

Muth's Honey Extractor,
Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.
Apply to C. F. MUTH,
976 and 978 Central Ave., CINCINNATI, O.
☞ Send 10c. for Practical Hints to Bee-Keepers.

1868. 1884.

HEDDON'S
COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

SECTIONS.

I have now made arrangements so that I can again supply you with those nice white Dovetailed Sections, 4¼x4¼x7 to the foot, and 8 to the foot, $7.00 per 1,000 from here. Will be ready to ship on and after March 15th.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

BEE-KEEPERS'
SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax, the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS!

The present prices are as follows:

White Clover, $15.00 per bushel, $4.00 per peck, or 30 cts. per pound.

Alsike Clover, $12.00 per bushel, $3.25 per peck, or 25 cts. per pound.

Sweet Clover, $10.00 per bushel, $2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE
For Brood Frames.

One ounce spools, each, - 4 cents. Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents. Postage, 13 cents extra.

One pound spools, each, 40 cents. Postage 18 cents extra.

One pound will wire about 175 frames.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,

923 West Madison Street,
CHICAGO, - - ILLINOIS.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

A manual, containing all the newest discoveries in the management of these little workers.- Plain Dealer, St. Lawrence, N. Y.

Full of practica instruction, that no one who contemplates keeping bees can do without.--Farmers' Journal, Louisville, Ky.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

PRICE—Bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

THOMAS G. NEWMAN,
925 W. Madison St., Chicago, Ill.

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861.

Chicago, Ill., March 19, 1884.

VOL. XX. No. 12.

THE WEEKLY EDITION OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **$1.**

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

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To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

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20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* **8** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Letters for publication must be written on a separate piece of paper from items of business.

☞ The Mahoning Valley bee-keepers will hold their next meeting in the Town Hall at Newton Falls, O., on Thursday, April 10, 1884, at 10 a. m.

E. W. TURNER, *Sec.*
L. CARSON, *Pres.*

THE AMERICAN BEE JOURNAL

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,.................	$2 00..	
and Cook's Manual, last edition (in cloth)	3 25..	3 00
Cook's Manual, (in paper covers)....	3 00..	2 50
Bees and Honey (T.G.Newman) cloth	2 75..	2 50
Bees and Honey (paper covers)......	2 50..	2 25
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work.........	4 00 .	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
Alley's Queen Rearing........	3 00..	2 75
Scribner's Lumber and Log Book....	2 35..	2 25
Fisher's Grain Tables..................	2 40..	2 25
Moore's Universal Assistant.........	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees..........................	2 75..	2 50
King's Text Book......................	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
New Eng. Apiarian, (W.W.Merrill)..	2 75..	2 50
British Bee Journal....................	3 75..	3 50
The 8 above-named papers.......	9 00..	7 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.

Advertisements.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
GEO. W. HOUSE, Fayetteville, N. Y.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

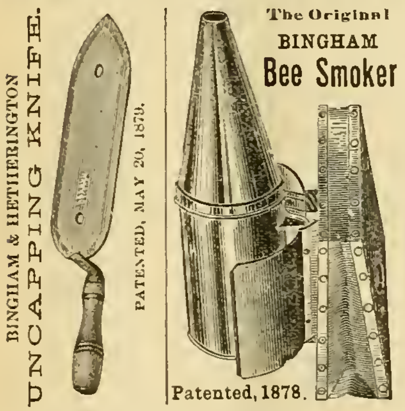
We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
5ABly HAMILTON, Hancock Co., ILL.

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM
MAYSVILLE, KY.

37Aly

VALUABLE
ORIGINAL PATENTS.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

BOOKS!

Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

Dzierzon's Rational Bee-Keeping.—A Translation of the Masterpiece of that most celebrated German authority, by H. Dieck and S. Stutterd, and edited, with notes, by Charles N. Abbott, *Ex-editor of the "British Bee Journal."* Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon....has probably made greater strides in scientific apiculture than any one man...For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, **$2.**

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. **Price, $1.00**

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means can afford to do without. Cloth, **$1.25**; paper cover, **$1.**

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.,** postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **5c.**; per dozen, **50c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey.' Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price **35 c.** postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. **40** cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000,000 Indusdustrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 Items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, **$2.50.**

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information Price **25c.** for either the English or German editions.

Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15** c.

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.25; for 200 colonies, $1.50.

Deutsche Buecher,
Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung derKönigin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Arſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., MARCH 19, 1884.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The Vice-Presidents of the National Convention.

A recent letter from a Canadian gentleman, who was at the Toronto Convention, throws some light on the subject of the vice-presidents of the North American Bee-Keepers' Convention. He says:

Toward the close of the convention, some one who managed to keep his mind on business a little during the general jollification, said that the vice-presidents ought to be elected. This was agreed to, and after some talk it was decided to re-elect all the old ones except where any objection was made. The next thing was to find out who the old ones were, which was solved by the Rev. W. F. Clarke pulling a small pamphlet out of his bag and handing it to the chairman. The list was read, and some changes were made, including appointments for Manitoba (Hon. Mr. Wallbridge), and some States not before represented. After it was all done, it was found that Mr. Clarke's list was not for 1882-83, but for a year or two before. However, it did not seem to make much difference—something had been done, and the gasmeter was rapidly filling, and the stream of talk was turned on again. As far as I can remember no record of the vice-presidents was taken, except by Mr. Bengough, the short-hand reporter to whom Mr. McPherson refers in his letter to the BEE JOURNAL of the 5th inst. That is the plain, unvarnished tale. It is to be hoped that Dr. Miller will be a more methodical secretary than his predecessor, who did not take a note during the proceedings.

It seems rather a queer thing that at such an important series of meetings no minutes were read or kept, but everything left in the hands of an outside party, and on account of some disagreement between him and his reporter that the bee world should be deprived of valuable information.

The following, from the Reporter who was censured for not furnishing the report, is due both to him and our readers:

EDITOR BEE JOURNAL:—A friend has shown me your issue of March 5, containing your article on the "Report of the National Society." I have, no doubt, that your readers would be interested in *my* story, after reading Mr. McPherson's reference to "war-like correspondence," "unbusiness-like conduct," etc. The following letter sent by me to Mr. Jones will, I think, make the whole matter clear. The Mr. Moore mentioned is the friend to whom Mr. Jones first spoke, and who in turn told me (on the morning of the first day's session, only a few minutes before it commenced), that Mr. Jones wanted a report of the convention.

"TORONTO, Oct. 16, 1883.

D. A. JONES, ESQ., Beeton, Ont.—*Dear Sir:* I regret very much that I was not in the office when you called on Saturday. Mr. Moore has shown me a letter to him in which it is stated that you could have got a reporter to report the convention for $25. I have seen reason to regret that this reporter was not engaged, as I consider three days and two nights of my time are fully worth that amount, to say nothing of the time consumed in transcribing the notes.

"I spoke to Mr. McPherson at the convention when he attended—I believe the first evening—and thus gave him timely notice of the probable cost of the report. He spoke as though the matter was in your hands, and, therefore, when you brought the matter before the convention, I again mentioned to you that at newspaper rates the transcript would be worth over $100. I afterwards spoke to Mr. Muth and yourself, hoping that an arrangement night be made, before the officers of the convention dispersed, by which the whole business would have been thoroughly understood and properly settled. Mr. Muth said that a few officers could make up the amount if necessary, and as there was to be a meeting in the honey house that evening, I felt satisfied to leave the matter in the hands of the committee.

"When the matter was mentioned to me at first, on the morning of the first day, by Mr. Moore, I supposed that Mr. McPherson was one of the officers of your association, as it was stated to me that he was willing to contribute $25 towards the report of the proceedings. I presumed that you intended to make arrangements with the committee by which Mr. McPherson's share of $25 would be accepted as part, and the association would be asked for the balance. I, therefore, went on with the work, trusting you to make it all right. On the morning of the first day, when the Rev. Mr. Clarke asked me for whom I was reporting, I told him you had engaged me, and he said, 'Mr. Jones is good for it." That is the way I felt, and this is why I did not make a definite arrangement at the start. I knew that the association would not allow any member to pay out of his own pocket for work done for them as a body. I trust that you will appreciate my proposition in this matter, in order to bring it to a conclusion. I am willing to forego the time already spent on it, and hereby offer without prejudice to furnish a report of the proceedings for $75.

Yours truly,
THOS. BENGOUGH."

I submit that this letter answers all charges preferred against me. It shows: 1. That I never undertook to furnish a report for $25. 2. That at a very early stage in the proceedings I told Mr. McPherson what the report would cost, and that later on, and while the matter was being discussed in convention, I informed Mr. Jones on the same point. 3. That I never refused to transcribe my short-hand notes, but, on the contrary, I offered as early as October to do the work for 25 per cent. less than the price mentioned. 4. That I spoke to the Treasurer of the National Society with a view to instructions. 5. That the convention deliberately decided to have the report published, and that I am dot responsible for the failure, as I never received an official requisition for the transcript.

The report is actually much longer than I anticipated when I spoke to Mr. McPherson, and at newspaper rates would be worth at least $150, while at tariff rates for convention work, it would be worth nearly $200. I am willing, however, to take $100. the amount calculated on, and will guarantee a first-class report. In order to avoid further "unbusiness-like conduct," I would suggest that a check be deposited by the Treasurer with some responsible person here. with instructions not to pay it until I have delivered the report into his hands. I will then proceed at once with the work, and will guarantee perfect satisfaction.

Allow me to add that I shall be surprised if, after reading the above, the officers and members of the National Society will be parties to a policy of repudiation that involves a breach of faith. The loss of my time and lobor, though it occurred at a time of the year when I could least afford it, is nothing compared with the loss of the Society's honor which repudiation involves. My only fault has been over-confidence in those who seemed to me to speak as representing the Society. I think it is too bad that I should lose time and labor, and the Society should lose its reputation and its report, simply because "some one has blundered."

How does the matter strike you now, Mr. Editor?

THOS. BENGOUGH.

It "strikes" us as being a very unbusiness-like affair on all sides. If the convention desired a stenographic report, it should have appointed a committee clothed with full powers to procure it. On the other hand, the Reporter should have made an agreement for some definite sum, either by the folio or the job. As none of these things were done, bee-keepers in general are not to blame. The Society took no steps to procure the Report, and are not responsible for the representations of those who were not even its members.

Of course a "blunder" has been made—or, rather, many of them, by the lack of a business-way of procedure. The Society voted that its proceedings should be published in pamphlet form, but appointed no one to do it; and while it has the "funds" to procure it, no steps were taken to do so—hence there can be no just charge of *repudiation.*

If President Jones had ordered it for the Society, he would have taken and paid for it out of the Society's funds, at the proper time; but now it is *too late* to be of value to any one.

It is an unfortuate affair; and we would suggest a compromise—pay for the "notes" already taken, and let the matter drop—the copying is the costly part—let that remain undone. We paid for the report published in the BEE JOURNAL, and no charge of repudiation can be made against us—let that be considered the official report—and—"let us have peace."

Having given both sides a chance to present their version of it, we cannot spare room in the BEE JOURNAL for arguing, so now let the matter drop.

☞ We have received a pamphlet giving the report of the Hants and Isle of Wight Society, in England.

☞ We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will probably be 50 cents.

☞ The Dutch papers mention the discovery of a "certain cure" for gout. A peasant who was confined to his bed by a sharp attack was stung by a bee, and almost immediately he felt better, and next day he was well. A short time after another patient thought he would try the same remedy, and, having induced a bee to sting him on the part affected, he also was cured.

THE HYGIEAN HOME COOK BOOK; or Healthful and Palatable Food without Condiments. Fifth edition. Price, paper 25 cents, cloth 50 cents. Fowler & Wells, Publishers, 753 Broadway, New York.

A new edition of this manual of healthful cookery is on our desk. It is not a work on the philosophy of food, but one giving recipes for its healthful and palatable preparation.

☞ The Glucose Factories seem to be in trouble everywhere. The Toronto, Ont., factory was recently sold because the "share-holders had lost $135,000, which they had invested in it." It is not being operated now, and the purchasers are losing $20 per diem, on their investment. For this reason they have petitioned the City Council for exemption from taxation. Would it not be more honorable, as well as more profitable for them, to turn the factory to some legitimate and beneficial use?

Local Convention Directory.

1884. *Time and place of Meeting.*

March 20.—Southern Indiana, at Madison, Ind.
H. C. White, Sec.

Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.

April 9.—Ass'n of Central Ills., at Bloomington.
W. B. Lawrence, Sec.

April 9.—Lorain Co., at Elyria, O.
O. J. Terrell Sec., North Ridgeville, O.

April 10.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Western Michigan, at Berlin.
F. S. Covey, Sec.

April 24, 25.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 3.—Progressive, at Bedford, O.
J. R. Reed, Sec.

May 6.—Southern Wisconsin, at Janesville.
J. T. Pomeroy, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

W. J. Ellison, Stateburg, S. C.—1 page—Italian Bees and Queens.

F. H. Chamberlin, Dexter, Iowa,—6 pages—Given Comb Foundation.

John T. Smith, Bellevue, Mich.—1 page—Comb Honey Rack.

Rev. Wm. Ballantine, Sago, O.—1 page—Queens and a New Bee Book.

Thos.Gorsuch, Gorsuch, Pa.—1 page —Acme Honey Case.

H. H. Flick, Lavansville, Pa.—1 page—Apiarist and Fine Stock Breeder.

Z. K. Jewett, Sparta, Wis.—4 pages —Evergreen and Deciduous Tree Seedlings, Small Fruits, etc.

Geo. Neighbour & Sons, 149 Regent Street, London, England—8 pages—Second-hand Bee Books.

James M. Hyne, Stewartsville, Ind. —8 pages—Bee-Keepers' Supplies, Bees, Queens and Honey.

Paul L. Viallon, Bayou Goula, La.—8 pages—Apiarian Implements and Italian Bees and Queens.

Howard U. Ackerman, North Indianapolis, Ind.—2 pages—Poultry.

Reynolds Brothers, Williamsburg, Ind.—10 pages — Bee-Keepers' Supplies, Bees, Queens, etc.

☞ The Caledonian Apiarian Society's eleventh grand show of honey, hives and bees, will be held at Edinburgh, Scotland, in connection with the Highland and Agricultural Society's Show, on the 22, 23, 24, and 25 of July, 1884.

CORRESPONDENCE

For the American Bee Journal.

How Far will Bees Go for Honey?

G. M. DOOLITTLE.

On page 36 I notice an extract from Mr. Pettigrew's "Handy Book of Bees," in which the claim is made that "bees will perish and die for want of food within three miles of good pasture." Mr. P. farther states as his opinion "that very few bees go more than two miles for food."

As this is a matter of interest to all, I will give some facts which have come under my observation, going to prove that Mr. P. is incorrect in his conclusions as applied to the United States, however the case may be, regarding the flight of bees in the Old World.

If bees only went two miles in search of food it would take but a limited conception to see that a very few colonies of bees would overstock many localities where now large apiaries are kept. This matter of overstocking my location with bees used to worry me quite a little when I had from 20 to 40 colonies of bees, but when I became convinced that bees went from 3 to 4 miles from choice for honey, I ceased to worry about it, and I find that at the present time bees do as well as ever with over 300 colonies within a distance of a mile of me.

When I had been keeping bees about two years, and had some 18 to 20 colonies of black bees, I chanced to go into the orchard near by to watch the bees at work on the apple blossoms. The spring before this, Italian bees had been introduced into a town adjoining ours, and were increased to some 30 colonies, the increase being made wholly by division, so there could have been no stray swarms of Italian bees in the woods. These bees were fully three miles from me in a straight line, and as I then believed the same as does Mr. Pettigrew, you can imagine my surprise when almost the first bee I saw proved to be an Italian. Upon examination I found that on an average one bee in five was Italian, which were at work on the apple bloom, and this with apple blossoms in profusion every where.

Still later, this same season, I was cutting a field of clover one mile from home, or four miles from these same Italians, when I saw bees at work on the clover. As I had read, previous to this, much about Italian bees working on red clover, I stopped the horse, got off the machine, and to my surprise counted five Italians to two blacks, and this with fields red with clover every where. I was now convinced that there was little need of fearing that I would not be able to keep 100 colonies without overstocking my pasturage, as that was the number I then desired to attain. But so far I had only proved that bees would go at least four miles from home to work, but could not say whether they could work to advantage that distance or not. In the latter part of August, 1874, I ascertained that the bees were getting honey from buckwheat, by the odor which greeted me from the bee yard on damp evenings. As there was not a field of buckwheat in sight of the apiary, I was curious to know where the honey came from. At two miles from home I found a small field of about three acres, and a mile further on was another field of about the same size, while at a distance of about five miles there was from 30 to 50 acres all in full bloom. The result of the buckwheat season showed that from about 60 colonies I sold 900 pounds of buckwheat comb honey, and the bees had at least 1,500 pounds of the same kind to winter on, as the hives were nearly destitute of honey before, and at the end of buckwheat they had a great abundance.

Again, the nearest teasel fields are from 2½ to 3 miles from my apiary, while they extend from there on ten or more miles. A bee which works on teasel gets her abdomen covered with a whitish dust, so that she is as readily distinguished as is one which works on pumpkin or squash blossoms. As teasel commences to bloom at about the same time the basswood does, the bees must leave the basswood to work on the teasel, which thing they do, for where both are secreting honey, I find about half of the bees going into each hive covered with teasel dust, and at times when basswood yields but little, nearly all the bees will be thus dusted. Besides this reason for believing that the bees work on teasel as above, I have another: I attend church 2½ miles from home, in the direction of these teasel fields, and when the teasel is in bloom I have seen them by the score pass the church, going to and from the fields when the wind was unfavorable.

Once more: Seven miles to the southeast is a hill which is the highest point in our country, it being nearly 800 feet higher than my apiary. After a distance of one mile, there is a gradual rise until the top of the hill is reached. There are from 10 days to 2 weeks difference in time of the basswood bloom between that at the top of this hill and the same near my apiary. The past season, the bees labored to just as good advantage, as far as I could see, for 7 days after the basswood bloom was all gone 3 miles distant, as they did when it was in blossom nearer the apiary.

In this, my experience is different from the author of Quinby's New Bee-Keeping (L. C. Root), who says: "During the large yield from basswood in 1874, as the blossoms failed in the valley, the bees continued bringing in the same quality of honey, following the basswood day by day as it opened on the hills, until the first week in August, when they still came in heavily loaded, but very tired from a long flight. I drove to the heights, 6 miles distant, and found the basswood was there just coming into bloom. I immediately moved 48 colonies to this location, and in the following week these 48 colonies gave me one ton of surplus honey, while the 71 colonies left at home did not secure one-half that amount, yet they continued working upon the same ground during the entire period."

However, there is one thing Mr. Root failed to note, which is, that if a continuous good yield is to be secured, it is necessary to have continued good weather, for if 2 or 3 days of rainy weather should occur when the bloom had receded 4 or 5 miles (thus allowing the bloom to fail for a distance of a mile or so beyond where the bees had gathered honey), they will never go to the hill-top, be the honey ever so plenty there.

The solution seems to be that after the rain they go to the trees where they last procured honey, and finding none, nor any near by, conclude that the harvest is over without going over the strip where the honey has failed to that which is beyond. In the above I believe I have given good proof that bees do labor to advantage from 4 to 7 miles from home. If any are still skeptical let them turn to page 181 of *Gleanings* for the year 1882, where they will find an article from the pen of H. A. Marsh, which will convince all.

Borodino, N. Y.

For the American Bee Journal.

Peculiarity of Laying Workers.

R. M. OSBORN.

On June 1, 1883, I prepared 5 three-frame nuclei with bees and brood; and No. 2, in a few days, had laying workers, and for 27 days they would not take care of a queen-cell, and I put a virgin queen into this hive, and they drove her out in two days, and at the end of 27 days I believe they had 1,000 laying workers, so at night I killed them with sulphur, and cleaned out the hive and refilled it with bees and brood; the other 4 nuclei were full of bees for four months. I kept replenishing them from other hives, and they were queenless all the four months except while their queens mated. I did not let them stay in after about 10 to 100 eggs were laid. I grafted in queen-cells as soon as the queens were taken out. These four nuclei have never had a laying worker yet; they are yet on the summer stands.

Colony No. 14 (pure Syrian) had 7 combs all solid with capped brood on May 1, 1883. About May 10 all was hatched, and the combs were all filled with eggs in a few days, and some cells had 6 to 8 eggs in each, and when all was capped, it was a curiosity; the 7 combs were all worker cells containing about 20,000, and about 12,000 of them were drones; the workers were all regularly capped, and the drones were regularly at intervals all over those combs.

About June 24, at 2 p. m., I was alarmed, and I rushed to the scene of action, and it was a sight to see about 12,000 degraded drones swarming from this hive, and worker bees guarding the entrance, refusing the drones to return; I closed the entrance, and the drones that clustered on the hive, I killed that night. In the morning I found all the rest of the drones clustered inside of the hive, near the entrance, and I killed them all. I had no queens to mate, and in a short time they had the combs all filled in the same style as before, and when capped I shaved all the two-story cells down level with the capped worker cells, and the laying workers were quiet.

No. 32 (pure Italian) was infested in the same manner, and about the same length of time.

No. 30 (pure Italian) was queenless from May until September. I kept them replenished from other hives, and never had any laying workers.

No. 48 (Syrian-Italian) was queenless three months, and replenished from other hives, and never had a laying worker.

No. 29 (pure Syrian) was queenless, and had no laying workers.

I found drone cells in several other hives through the season, all through the worker brood, and I removed the queens to learn the cause, and afterwards returned the old queens. I found more of those laying workers in June and July. Those drones do not make long trips from the hive; they are lazy; and the bees do not let them live long. The Syrian-Italian bees are my favorites.

Kane, Ill.

Middlesex, Ont., Convention.

A meeting of prominent bee-keepers was held at Ailsa Craig last week, for the purpose of forming an association to advance their mutual interests, and discuss matters appertaining to the keeping of bees. An organization was effected with the following officers: President, Mr. Campbell, of Parkhill; Vice-President, Mr. Atkinson, of Ailsa Craig; Secretary, Mr. Stewart, of Ailsa Craig. A profitable and interesting discussion followed, on "Bees and their Habits and Improvement," after which a deputation consisting of Messrs. Aikes, Campbell and Atkinson, was appointed to interview the directors of the Western Fair, with a view of securing better accommodation and inducements for bee-keepers wishing to make exhibits. The next meeting will be held in London, Ont.

For the American Bee Journal.

Spring Dwindling.

J. E. POND, JR.

March is the month of terror to bee-keepers. Few colonies die during winter if any care at all is used in fall preparation, but spring dwindling, which does not affect the colony till the severity of winter is over, decimates more apiaries than all other causes combined. What is spring dwindling, and how can it be prevented?

These are serious questions, and as yet no positively correct answer has been given. The matter is largely one of theory, and possibly a solution may never be found, still in matters of true theory it does well to agitate, for by agitation only can we arrive at truth; that is, if no agitation is made, and no discussion had, the matter may be allowed to slumber into forgetfulness never to be awakened. Spring dwindling is characterized by diarrhœa, misnamed dysentery; find the cause and you prevent the disease; discover a remedy and you can cure it.

There is a remedy, but the great trouble is, it cannot be applied. Cleansing flights will cure this diarrhœa, for it is not a disease, but only an overloaded state of the bowel; and this overloaded state is found at just the time when the bees cannot safely fly, else there would have been no such condition. It being impossible then to apply a remedy, we must bend our energies to seeking out the cause, for that is the only course now left us. As many causes almost as there are bees in a colony, have already been given us, none of which, however, have proven to be correct; and in my opinion their authors had little faith in their correctness, when they presented them. The trouble is, there are many causes; or a combination of causes is needed to produce it. The bee in its normal state can exist for many months without the need of a cleansing flight; and during that confinement can partake of both honey and pollen without producing any disturbance of the bowel, all effete matters being carried off therefrom in a dry state. If this is so, and I defy proof to the contrary, we must then look for some poisonous condition of the food, as the cause of this acute inflammation which causes diarrhœa; for acute inflammation there must be, to change the contents of the bowel from a dry to a watery state. Now, what is it?

I propose to answer the question at the risk of calling down heaps of scorn and derision, from those who have already spelled, but have not got to the head. Unsealed honey may be, and at times is a cause of this complaint. Confine a colony on a warm day, and when you let them out, do they not show symptoms of diarrhœa? And if the confinement lasts for several days, they are very largely affected by it.

Again, sealed honey may contain enough moisture to cause it to ferment. Does any one deny this? If so they can easily verify it. But the real cause is, no doubt, lack of proper ventilation. This will cause moisture in excess; the bees in their endeavor to get rid of the moisture, are forced to partake of food; this food has become soured, and ferments, and the consequence is, that the bowels are inflamed.

Now if a warm pleasant day follows immediately, no trouble ensues, but if it continues cold for a number of days, food must still be partaken of, and the bowel constantly becomes more and more distended, till at last poor bee nature can stand it no longer, and must discharge its offensive contents in the hive or die, and if relief by reason of warm weather does not come soon, the whole colony succumbs and dies.

The above is my answer in brief, and I shall stand by it till some one gives a better one. If I am correct, the remedy is easy to ascertain, but, perhaps, difficult to apply. It consists in so ventilating the hive that a perfectly natural condition of things is constantly kept up during the whole term of freezing weather. How this state can be brought about, I leave for others to determine. I have my own ideas on the subject, and at some future time may be tempted to make them known. For the present I am content if I have started up a little spark, which may, in the near future, form a big blaze.

Foxboro, Mass.

For the American Bee Journal.

Cyprian and Holy Land Bees.

D. D. DANHER.

I have had both kinds for 3 or 4 years, and would like to give my opinion of them. I obtained Cyprians for two breeders to see if they would be alike. Their manner was alike, but one was dark in color and the other light. I think the dark ones the hardiest, the best honey gatherers, and they do not rob as much as the others. I have 8 or 10 colonies of them, and am not sick of them. If Mr. Doolittle wants to get rid of his, I will take them, for I think they will just suit me.

I have two Holy Land queens; they are very dark, and so are the bees, but they are good workers, always strong in numbers and stores. They are always ready for defense. You can leave home for a month and leave the honey board off, and they will take care of themselves.

I have 28 colonies of bees buried; they are mostly in deep frame hives, but some are in straw hives, logs, and box hives. Two are on the summer stands, and all are wintering first rate.

Madison, Wis., March 5, 1884.

For the American Bee Journal.

An Important Point in Wintering.

ALLEN PRINGLE.

In a late issue of the *Canadian Farmer*, a correspondent, in giving his apiarian report, tells us how he put 25 colonies into a cellar "built expressly for the purpose" in the fall of 1882, and when he came to take them out in the spring, they were "one mass of mold." He says they did not appear to have sufficient ventilation; that the entrances were completely choked up; and between dysentery and mold were a terrible mess. After the spring dwindling was over, he found himself with only 4 colonies.

Now, this case furnishes a good text. It affords an excellent opportunity to point out a radical defect in the construction of hives; a defect

I have not unfrequently noticed even in the hives of leading apiarists and supply men.

In every hive, no matter what the style, there ought to be a ventilating hole in the back part 2 or 3 inches above the bottom-board. This should be covered with strong wire gauze inside, and a good button outside, so that it can be opened and shut at pleasure. In hot weather it can be left open, and then serves as a good ventilator. In the spring and fall, when a leading object is to keep the bees warm, and there is a sufficient ingress of fresh air at the entrance, this hole can be filled with wool from the outside, the button closed, and the cold thus kept out.

But it is in wintering that this arrangement is imperatively needed and becomes especially important. Indeed, I regard it as quite indispensable whether the bees are wintered outside or in. When wintered in a cellar or in a bee house the button can be left open; and then, no matter how many dead bees may be deposited on the bottom-board, choking up the entrance, the air can still enter at this hole.

And it is of equal value and importance in wintering outside. Lately I have noticed in more than one of the bee papers correspondents anxiously inquiring about the safety of colonies covered up in the snow drifts. And well they may, if they have not looked after this matter. A strong colony of bees under a snow bank, with other winter protection, will generate so much heat that even though the entrance may have been left wide open, the snow surrounding it will be melted from time to time until the entrance becomes completely closed with a thick glade of ice. Then if there is no other medium of air ingress, good-bye to the bees in a majority of cases. Still, there is probably this exception: In the case of a double-walled hive filled in with sawdust, and "ship-lapped" like the Jones double-walled hive, I am inclined to think that bees would not smother even though all the entrances were closed, that is, if the hive had not been so long occupied as to be hermetically sealed up inside the walls with wax. But these hives are not yet in general use, and even though they were, it would hardly be safe to depend upon the collateral ventilation through the walls of the hive under a snow drift. But it is quite impossible for the ventilating hole described above to become filled with ice; and it will serve to ventilate when the entrance gets either clogged up with bees or frozen up with ice.

This winter I am wintering 8 of the stronger colonies outside on the summer stands. Some 2 or 3 weeks ago, soon after the first heavy snow storm, I went to examine them, as some of them were quite covered up with snow. As I had stuffed the back ventilating holes with wool in the fall, and closed the buttons, I thought they might need some attention. I have three or four styles of hives in my apiary—the Jones hive, double and single-walled; the Thomas hive improved; and a hive I make, which is quite different from both, and for which I have no name, and holding 14 frames below and 14 above, which I use mostly for extracted honey. I have also one Langstroth hive—a hive which has good features, but I do not like the frames for extracting. The bees I have wintering outside are in two double-walled Jones hives; two single-walled ditto; three Thomas improved; and one of my own nondescripts, making eight.

They are all, of course, provided with the back hole ventilator, for I always try to practice what I preach. One of the double-walled hives which I had not made myself, was without the hole, but I put it in during the fall while the bees were in the hive. Of course the double-walled hives, filled in, require a tube in the hole to keep the sawdust or other filling from running out. In this last hive mentioned, the bees were crowded up in the fall on about six frames; and behind the division-board was packed with dry forest leaves with some dry pine sawdust on top of them. (The frames in the Jones hive run parallel with the entrance instead of at right angles with it as is the case with most styles of hives.) Above all this was spread the cloth and then the heavy quilt packed with sawdust. As already stated, the hole behind in all the hives was filled with wool and the buttons closed in the fall. Upon examining the entrances after the snow storm, I found some of them completely stopped up with ice. The bees, however, were all right, as the hives clogged were the double-walled ones, besides they had been but a very short time in that condition. I opened the buttons behind, took out the wool, placed a piece of woolen cloth, three or four double, over each hole and filled in again with snow, and covered them up as they were, leaving the front entrances alone. Two or three heavy snow storms since have covered them up still deeper; but I am content to risk them though ten feet of the "beautiful" should rise above them. Indeed, I would rather have the snow on them than not, especially when the mercury is dancing around below zero most of the time.

Such a winter as this, so far, they are better under the snow than over it, and when it drifts off them, I shovel it on again. Had I known that this winter was going to be so terribly severe as it has been so far here, I doubt whether eight of my colonies would have been left out to winter. Of course they are "protected," but when the mercury persists in remaining below zero for days at a time, no ordinary winter protection will keep frost out of the hives. The truth is, we are all disappointed in the winter. The weather prophets—Vennor, Oats, *et al.*—predicted a mild, open winter; and as last winter was so exceptionally severe, we, too, thought it would not likely be immediately succeeded by a similar one. But the "weather clerk" has sold us again, and our out-door bees must, I suppose, take their chances.

In addition to the ventilating hole already described, there ought also to be one in every hive in the front about the same distance above the lower entrance, or perhaps a little higher. As this is to serve sometimes as an entrance, the wire gauze must of course be omitted; but there must be a well-fitted button to cover it when not wanted open. This front avenue has more than one use, the principal one of which is to serve as an exit in winter and spring flights, when the bottom entrance is closed either with ice or dead bees, and before the hive is overhauled in the spring. At other times it can be kept shut if desired, except in hot weather when it can be left open for ventilation.

Selby, Ont., Jan. 24, 1884.

For the American Bee Journal.

Southern Wisconsin Convention.

The bee-keepers met in Janesville, Wis., on March 4, and organized a permanent society, to be known as the "Southern Wisconsin Bee-Keepers' Association." The following named persons were elected officers for the ensuing year: President, C. O. Shannon; Vice-President, Levi Fatzinger; Secretary, J. T. Pomeroy; Treasurer, W. S. Squire.

The regular sessions of the association will be held on the first Tuesday of March in each year. Special meetings will also be held, the time and place of which will be determined at previous meeting.

The object of the association is to promote scientific bee-culture and form a bond of union among bee-keepers. Any person may become a member by signing the constitution and paying a fee of 50 cents. The next meeting will be held at the Pember House in Janesville, on the first Tuesday in May, at 10 a. m. All bee-keepers are cordially invited to attend. The secretary, J. T. Pomeroy, of Edgerton, Rock County, Wis., will conduct the correspondence of the association. J. T. POMEROY, *Sec.*

For the American Bee Journal.

Bees Eating Grapes.

HENRY ZEIS.

The following item is from the *Gardner's Monthly*, and I saw it in the *National Farmer*. As I wish to give my experience, I will quote the item here:

"It has been clearly demonstrated by Australian experience, that the honey bee can open flowers from outside as well as the humble bee in this country. We have never had any doubt ourselves that they do manage to cut open grapes somehow, and eat them; but as good entomologists declare that their tongues are not equal to the task, it was not wise to argue the point too strongly. But now that it has been clearly proved that they can cut open flowers to get the honey easy, there is no reason why they cannot cut a delicate grape skin also. We now regard the question settled. Bees do cut into and eat grapes, and to that extent are an injury to the fruit grower."

I have two acres of vines, of different kinds, close by my apiary of over 50 colonies, but I never saw a grape punctured yet by a bee, though I laid grapes in front of the hives. I know that they will not touch a sound grape, but if wasps injure them first, the bees will suck up the juice.

Pacific, Mo.

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For the American Bee Journal.

Convention at Davenport, Iowa.

The second annual meeting of the Eastern Iowa and Western Illinois Bee-Keepers' Association was held at Moore's Hall, Davenport, Iowa, beginning Feb. 21 and lasting three days. President I. V. McCagg called the meeting to order at 2 p. m. Secretary J. J. Nagle being absent, Wm. Goos was appointed secretary *pro tem.* The roll being called, most of the members were found to be present.

The minutes of the last meeting were read and approved. A motion to have a committee prepare a programme so that it could be published in the daily papers, was carried. The committee was as follows: C. H. Dibbern, J. V. Caldwell, and J. B. Lindley.

The Treasurer's report was read and approved.

A letter of invitation from the Academy of Sciences of Davenport, was read by the secretary, and accepted.

The report of the committee on Programme was made and adopted.

A motion to hold evening sessions was lost.

The following were elected officers for the ensuing year: I. V. McCagg, President; Geo. L. Gast, Vice-President; Wm. Goos, Secretary; Israel Hall, Treasurer; all of Davenport. An executive committee was appointed as follows: J. V. Caldwell, of Cambridge, Ill.; J. B. Lindley, of Muscatine, Iowa; and C. H. Dibbern, of Milan, Ill.

After receiving the reports of members, the convention adjourned to 10 a. m., Friday.

President McCagg called the meeting to order at 10 o'clock, there being a much larger attendance than on the first day.

According to programme, Mr. T. G. Newman then gave an address on "Marketing Honey." He spoke of the importance of the subject, and then of the antiquity of the business. More than 2,500 years ago is the first record we have of commerce in honey, in Tyre, and since then it had been marketed in various ways until we have the excellent methods of to-day. The product of the world is estimated at about $25,000,000, and of this 100,000,000 pounds is produced in America. A mistake made in the marketing of honey that reduces the price one cent per pound for the crop, would lose $1,000,000 for the producers, and to add one cent per pound would put that amount in the pockets of the producers. Comb honey, being a fancy article, we must so manage it, as to get a fancy price. We should make it attractive, assort and label, keeping each kind separately. Small crates sell the quickest, and are of the most advantage. Extracted honey should be ripened and placed upon the retail market in small packages, such as cans, jelly cups, kegs, etc., and being good for years, it has an advantage over comb honey. Candied honey could be carried in paper boxes. The candying is a proof of purity, and all honey should be labeled with the keeper's name and address; and that name should always be a synonym for purity, so that when a person purchases this honey he may feel sure it is absolutely pure, and in that way the producer could build up a local market that would last for years and increase constantly. He closed by advocating large exhibits of honey at all the fairs, in order to educate the people to the importance of the product, and to induce them to use honey both for food and medicine, and thus increase the demand.

Mr. Briggs, of Wilton, spoke on the subject of freights, and said he could get better rates by express than by freight.

The Rev. O. Clute heartily endorsed the ideas of Mr. Newman, and dwelt particularly upon the advantages and necessity of building up a home market—but then stated that more money could be made by keeping more bees, and producing more honey, and shipping it off to the great central markets than by fussing with the little home markets. Mr. Clute recommended large packages—600 pound barrels; it can be more easily handled as freight, and the merchants prefer it, as more economical in room in the store houses; besides, it sells more readily to the large purchasers for manufacturing purposes. Packages which hold 175 to 200 pounds may do for purchasers of small quantities, but 600 pound packages are the most profitable.

A very large part of the honey crop is now taken in the form of extracted honey. Comb honey is good and beautiful, but it has the disadvantage of the wax, which is indigestible, and which nobody cares to eat. In the extracted honey we have no wax, it is honey in its purest form. Many people associate extracted honey with strained honey; they suppose that all honey out of the comb is strained honey, but this is great injustice to extracted honey. In getting strained honey all the combs from a hive, combs containing capped brood, and growing larvæ and pollen and honey, are mixed up together and then the liquid squeezed out. In this way there is obtained some honey, but there is also obtained the juice of the growing larvæ of the young bees, and of the pollen, so that the honey has a rank flavor, a dark color, and associations by no means appetizing. But extracted honey is as different from this strained honey as it is possible to be. In getting extracted honey, we get no pollen, no juices of bees or larvæ. We get simply the pure honey, without any admixture whatever. He, who on a cold winter morning has never had pure, candied, white clover honey to spread on his hot cakes, has lived in vain! Life has lacked for him one of its chiefest charms! He said that he never understood the full meaning of the scripture description of "the land flowing with milk and honey" until he went into the honey business. Take a dish of pure extracted honey, and pour cream from your Jersey or Ayrshire cow over it, and you have a dish fit for any god or goddess that ever dwelt upon Olympus.

Mr. Joshua Wadsworth, of Moline, Ill., said that talking about 600 pound packages for shipment was all well enough, but he did not believe that many there raised enough honey to fill even two packages of that kind in a year. What is wanted is information as to the best method of disposing of honey in local markets. He spoke of the importance of neat packages, avoidance of overstocking the market, etc., and other matters of interest to the bee-keeper.

A recess for 15 minutes was taken, when new members were received, and the membership fees collected.

The executive committee reported that they did not think it advisable to hold more than one annual meeting, and recommended that the annual picnic be held on Blackhawk's Watch Tower, four miles south of Rock Island, on the second Tuesday in August. That the Secretary be instructed to notify the members at least two weeks previous to the holding of the picnic. They also recommended that the portion of the President's address relating to the members being sociable with each other, be adopted. That the invitation of Mr. O. Clute, of Iowa City, to visit his apiary, be accepted. The time to be set by Mr. Clute sometime during May. Also that the invitation of Mr. E. L. Briggs, to visit his apiary at Wilton sometime in September, be accepted; the time to be arranged by Mr. Briggs.

It was voted to refer this back to the committee to fix the dates for the picnics.

Mr. J. V. Caldwell, of Cambridge, Ill., spoke of the difference in flavor of extracted honey and comb honey. People, as a rule, liked comb honey the best. It was more tasty.

Mr. Newman said that the difference in the pleasure experienced in eating comb and extracted honey, was probably explainable thus: In eating extracted honey, a spoonfull was taken into the mouth on the tongue, back of the tip, and was swallowed without obtaining the full richness of taste, while the comb honey was taken by the teeth, and the tip of the tongue received the full flavor and deliciousness of the honey, permeating the organs of taste, and giving the whole system a feeling of ecstasy that would fill even a mythical god with delight.

Adjourned till 2 p. m.

The afternoon session was called to order by Pres. McCagg at 2 p. m., when the bee and honey reports were taken of those who were not present in the morning.

The Rev. E. L. Briggs gave an address on the different varieties of bees. After describing the large bees of Java, the little stingless bees of South America, the native black and brown bees of North America, the Carniolan, Egyptian, Italian, Cyprian, and Syrian bees, he said that he preferred the pure Italians, which were both prolific and hardy.

The Rev. O. Clute described his method of wintering bees, and said: I am careful to see that they have honey enough in the fall; as a rule, 25 lbs. is a large amount. Keep the bees strong in the fall, but it is better for them not to have any brood when you move them into the cellar, for all the young bees ought to have a fly before putting them into the cellar. I give no upward ventilation. I have shallow trays made that fit over the hive; the bottoms of the hives are covered with muslin, and the trays are filled with sawdust. They are wintering very good; better than usual. I carry them into the cellar after cold weather has set in, but not too early in the season. I then pile them from 3 to 4 feet high, and put the lower row some distance from the bottom of the cellar. The chimney goes to the bottom of my cellar, and the draught carries off all the foul air. In my cellar the ground is dry—the windows are covered to make it dark; but I have them so I can open them, if I want to. I have a stove in the cellar to keep the temperature between 40° and 45°; they do not eat as much honey at that temperature as they would in a higher one.

Mr. Mead asked if there was any objection to putting the bees in a cellar where there are vegetables?

Mr. Clute said if the vegetables are not decayed it will make no difference. I leave the button open when I put them into the cellar.

Mr. T. G. Newman being called on to give his views concerning the best bees, said that the Italians no doubt possessed many of the most valuable traits of character. What we need is to "breed up," all the time keeping our eye upon the characteristics of "our ideal bee." To obtain the best results, we must possess the highest grade of bees that it is possible to obtain. Our object being to elevate the race, no deterioration should be countenanced, and the most thorough and rigid treatment must be employed, all looking to the building-up of a strain of bees that will give the best of results.

The queen must be prolific to be able to keep the hive full of bees, to gather the honey harvest when it comes; the bees must be industrious to let nothing escape their vigorous search while gathering the sweet nectar; they must be docile to allow the apiarist to manipulate them with ease and pleasure; they must be strong and hardy, to withstand the rapid changes in climate; and must be of singular beauty, to attract the admiration of the fancier of fine stock.

"The bee of the future" will be present at the very moment when the slumbering flower, under the penetrating dew, awakes to consciousness, and unfolds its buds to take in the first rays of the morning sun. The ideal bee will dip into that tiny fountain, which distills the honey drop by drop, and bear off its honeyed treasure to its cells of virgin comb.

In developing the highest strain of horses, not all their offspring are equal to the best; careful selection of those coming the nearest to the ideal animal must always be chosen, from which to breed, and the closest scrutiny is necessary while making that selection. The same is true of cattle, sheep, hogs, poultry and bees. "Sports" and "variations" continually occur, producing inferior progeny; but all careful breeders who have an eye to the improvement of the race, will reject those that do not come up to the "standard of excellence," sending such animals and poultry to the shambles—so let us carefully select the best queens and drones to breed from, and remorselessly sacrifice all others.

Rev, O. Clute spoke of the effort being made to get a good exhibit at the State Fair and suitable premiums for honey exhibits. The present premiums offered amount to about $175, obtained largely through his efforts, and he had strong hopes of succeeding in obtaining a still larger amount as an inducement to bee men to improve the quantity and quality of the exhibits. He also thought that the bee-keeping industry could be made of sufficient importance at the State Fair to cause the Fair managers to put up a separate building for that department, when the Fair is made a permanent institution.

Adjourned to Saturday, at 10 a. m.

On Saturday morning President McCagg called the meeting to order at 9:30 o'clock. Several communications were read, and among them was one from Mr. Jerome Twitchell, of Kansas City, giving advice on shipping honey.

A model of a straw hive, made by a Hollander, was presented to the Society by the Apiarian Supply Company of Wilton, Iowa.

Those who had articles on exhibition were each given five minutes to describe them.

Mr. Nagle then asked if bees are short of stores at this time of the year, what is best to feed them?

Mr. Wadsworth said he always kept a few full frames of honey for that purpose, and when a warm day came, he took out an empty frame and put in the full one.

Mr. Nagle thinks it is best not to disturb bees in the winter.

Mr. Gast thinks that feeding rock candy is good.

Mr. Younkin says he feeds taffy made of honey stired in with powdered sugar pretty stiff, and put it on the top of the frames.

The members then went in a body to the Academy of Sciences, as per invitation, when the little straw hive before memtioned, was presented to the Academy of Sciences by the association; Mr. E. L. Briggs making the presentation address. Mr. H. C. Fulton, President of the Academy, replied in a few well-selected words of welcome and thanks. Mr. T. G. Newman, being called on, made a few appropriate remarks. Mr. E. L. Briggs said that he would present to the Academy a model hive, with all the modern improvements, to put with the more-ancient straw hive, and show by contrast the advancement made in apiculture.

Adjourned to 2 p. m.

The afternoon session was called to order at 2 p. m. by President McCagg. The minutes of the former meetings were read and approved.

Mr. Kimball said he thought some of the most important things have been overlooked, such as introducing queens, fertile workers and foul brood. One of the members has foul brood in his apiary. I would like to know the cure and preventive.

Mr. Goos said, burn the hive.

Mr. Briggs said, it was probably brought about by introducing a queen or buying a nucleus, and unless something is done it will spread; the only way to cure it is to burn the hives and contents. It can be cured, but only with the greatest of care.

Mr. Kimball said that some one had shipped bees here that had it.

Mr. Carpenter: Some persons told me not to say that we had foul brood. We have our bees in a clamp, and they cannot get out; if they have it, I shall burn every one.

Pres. McCagg: Has your neighbor the same opinion of foul brood that you have?

Mr. Carpenter: Yes, sir; he says he will burn every one. Some bees were sent here from Illinois, four years ago, that had foul brood, but they were cured.

Mr. Briggs thought it was handed down from them.

Mr. Gast: I was in Clinton 16 years ago, and saw foul brood there, and it was spreading about Lyon, and even across the river, to Fulton. The cell is somewhat sunken with a small hole in the centre; you can tell it by the smell.

Mr. Nagle: I would like to say that our committee have been invited to hold their meeting at the Academy of Sciences, and if we send flowers or birds they can be identified there.

It was decided to hold all meetings between now and the next annual meeting at the Academy.

According to the programme, Mr. T. G. Newman then gave a lecture for an hour, on the necessity for providing bee pasturage. He described the advancement of the art of bee-keeping from its earliest date, and said that the unfolding of each invention was the result of the necessity for its existence. The woodman's axe had felled the trees, and the march of civilization had destroyed the wild flowers, from which the bees formerly gathered their stores—now it became a necessity that bee-keepers must supply the want, and provide pasturage for the bees, if they would have the best results. This subject was of immense importance, because if we failed to provide the bloom, the bees could not gather the honey, and the golden dollars would not glide into the pockets of bee-keepers, by the sale of that sweet article of commerce.

Rev. E. L. Briggs: If any one sets out shade trees, let them set out basswood or linden. Nature gives us a succession of bloom; first there is the willow, then the plum, peach, cherry, apple, gooseberry and raspberry, keeping the bees always busy enough to keep up breeding and have the hive full of young bees in time for the great honey flow in June from white clover. Young bees never fly until they are 16 days of age, and they will be ready just in time for this great honey flow, lasting about four weeks; then comes the linden, after that a vacancy in the honey flow comes in the right time, as the brood has been pretty well crowded out, and now the queen will fill every corner with brood for the young bees, for the fall flow of honey. Now comes the fall flow from heart's-ease, smartweed, goldenrod and catnip. I should sow seed, as Mr. Newman suggests, but not depend upon it alone. I just arose to supplement what Mr. Newman said. Mr. Muth, of Cincinnati, has his apiary on his house-top, and depends on Nature for his supply in the midst of that large city.

The Statistical Report for 1883 of the members of the association, was announced as follows: 1,703 colonies in the spring; 2,669 colonies in the fall; these produced 38,385 pounds of comb honey; 29,515 pounds of extracted honey, and 546 pounds of wax; 13 wintered their bees in cellars; 7 in bee houses, and 23 on the summer stands; 32 reported the bees in good condition, 4 fair, and 2 poor.

Mr. Moore: Do chickens eat bees?

Mr. Carpenter: Chickens eat drones; they catch them on the fly.

Mr. Nagle: Do they never catch other bees?

Mr. Carpenter: I have watched them, and have never seen them catch worker bees.

Mr. Briggs: If he has such chickens, I would like to buy some of them.

Mr. Nagle and Rev. E. L. Briggs explained their methods of rearing queens.

On motion the time for holding the next annual meeting was fixed for the third Wednesday and Thursday in February, 1885.

Mr. Newman suggested that the fact that reduced fares may be obtained, be incorporated into the notice for the next meeting.

On motion the convention adjourned till the third Wednesday in February, 1885. Wm. Goos, *Sec.*

For the American Bee Journal.

Specimens of Foul Brood.

T. J. BURRILL.

I notice Mr. Stewart's criticism on page 167, upon sending specimens of suspected comb through the mails. The points are well taken, and should be well heeded. My requests were not sufficiently guarded—indeed, I did not at the time think of the possible infection of a healthy colony through the mails. While the chance must be considered a remote one, and may be altogether avoided by proper wrapping, still men are not always prudent and careful, and as the matter is important, all ought to agree with Mr. Stewart. Please do not send me any more specimens in this way; perhaps it is better not to send any more in any way. I have enough of the genuine stuff on hand now to start any number of cultures.

The main point to determine by a large number of specimens is whether or not what bee-keepers call foul brood is always the same thing, and, if not, to ascertain reliable characteristics of the different diseases. Of the considerable number of packages received, all save one were clearly of the same nature. Two said to be a mild form of foul brood, contained the same microscopic organism found in malignant cases, and I have no doubt would upon inoculation of a healthy colony produce the same effect. But this latter might not prove true, because it is now known that some of these minute parasites or "disease germs" differ in their physiological effects while the appearance remains without change. Their virulence is modified, somewhat as cultivation changes the poisonous properties of certain flowering plants. This is a most proper subject for investigation, yet it cannot be done without material of all kinds and forms of the disease.

As spring approaches I find myself face to face with another serious impediment to a complete study of this dreaded scourge of the apiary. Manifestly an investigation to be practically valuable must include direct experiments on the bees themselves, including, of course, the young from the egg onward. Mr. Heddon queries (on page 164) whether ten miles is not a proper distance apart for apiaries. Suppose my experimental bees fly the distance thus suggested, and suppose the disease be distributed by the successive visits to flowers, what a pretty "kettle of fish" I should soon have on hand!

It is true that many think they know that foul brood is not conveyed from colony to colony by such means, but it seems certain that no one does know. To prove or disprove such points is the object of an investigation. I find it feasible to cultivate successfully the organism (*Bacillus*) in meat broth in little glass flasks stopped with sterilized cotton-wool. From a minute speck of the material in a diseased comb any quantity can be furnished by the aid of these flasks, and microscopical examination can be made at any time, and as often as desired without introducing other organisms from the air or otherwise.

In this way the life history of the "disease germ" can be made out—its method and rapidity of propagation, the effects of stated temperatures, of disinfectants, etc. So far there is no trouble, but how can we be sure that growth and development in meat broth is the same as in the brood of bees? Is it feasible to keep a sufficient number of bees shut up with brood comb to try results?

Champaign, Ill.

☞ We now club the *British Bee Journal* and our Monthly for $2.50.

Convention Notices.

☞ We will organize a bee-keepers' association at the Court House in Franklin, Ind., at 10 a. m., April 5, 1884. All bee-keepers are invited to attend and take part in the organization. L. R. JACKSON.
Urmeyville, Ind., Feb. 26, 1884.

☞ The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest, for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twichell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."

C. M. CRANDALL, *Sec.*
Independence, Mo.
H. SCOVELL, *Pres.* Columbus, Kans.

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

☞ The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.

O. J. TERRELL, *Sec.*
North Ridgeville, O.

☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyhoga County, O. All interested are invited. J. R. REED, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa, will meet at the Emmett house, in Dexter, on Saturday, March 29, at 10 a. m. sharp. All who are interested in apiculture are invited to attend.

M. E. DARBY, *Sec.*
W. B. KENYON, *Pres.*

☞ The next meeting of the Bee-Keepers' Association of Central Illinois, will be held in the office of the County surveyor, in Bloomington, on Wednesday April 9.

W. B. LAWRENCE, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Why did they Die?

I bought 15 colonies of bees in December, which are in a cellar where water will freeze, in cold weather; 14 colonies are apparently in good condition; the 15th having died from some cause unknown to me. I send some dead bees and honey, also a piece of the frame and empty comb. Please give me your opinion of them, and what to do with the rest, throug the Weekly BEE JOURNAL.

CHARLES GARVEY.
Hammondville, N. Y.

ANSWER.—Your colony of bees is afflicted with what is known as bee diarrhœa, dysentery or cholera. We think it is caused by eating improper food. It is not contagious, and regarding your other colonies, I know of no advice to give, better than to say set them out for a flight as soon as the weather is suitable. The worst time for realizing the havoc of this disease is yet before you.

Entrance to Sections over the Frames

1. Will Mr. Heddon please tell us in "What and How" whether the strips in his honey-board come directly over the top-bar of the frames, below or over the spaces between the frames?

2. Does the entrance to the honey boxes match the entrance in honey-board, or do they come directly over the strips of honey-board?

3. Would the queen be more liable to find her way to the surplus boxes if the entrance to them matched the spaces between the honey-board and frames below, than she would if otherwise?

4. Are the bees more liable to build bits of comb between the frames and honey-board, if the spaces match, than they would if otherwise?

5. Will the bees find their way to the honey boxes as soon if the entrances to them did not match the spaces below?

A. J. FISHER.
East Liverpool, O., March 8, 1884.

ANSWERS.—1. The slats in the honey board which are 1x⅜ inches, are so placed that their centers come directly over the spaces between the top bars of the brood frames below, while the center of the top-bars of the brood frames come directly *under* the spaces between the slats of the honey board.

2. There is no regularity regarding the matching or mismatching between the spaces in the honey board, and between the bottoms of the sections. This cannot well be, when using different widths of sections, nor with any width, unless as narrow as the room occupied by each brood frame. I find, however, that with our 1½ and 1¾ sections, the honey board breaks the joints between the sections, almost completely. This, however, is not of so much moment, as nearly all the brace combs are built between the honey board and brood frames, and not between the honey board and sections.

3. Yes.

4. Last year we had some hives so arranged that the spaces between the brood frame and honey board matched, and we were seriously troubled with bits of comb between the bottoms of the sections and honey board.

5. You will notice that with our style of honey board, if we put the cases on the hive without any honey board, proper bee spaces are still preserved. For the past 2 years we failed to make enough boards, and so worked about half of our colonies without them. We experienced much more trouble with brace comb, and daubing, but no more surplus honey, or greater tendency to enter the sections where the honey board is not used.

A Query.

Why does not honey run out of the cells when placed there by the bees, being at the same time thin and not capped?

SUBSCRIBER.

ANSWER.—Because it is held in place by the law of capilary attraction. Perhaps thin honey would not be as likely to run out as thick. It would shake out more readily, or obey any *immediate* command, but you know how a drop of water will hang to the underside of a board, and how a drop of honey would slowly but surely drizzle down.

SELECTIONS FROM OUR LETTER BOX

Bees All Right Yet.

My bees are all right, as far as I know. They have been shut in by the cold for the last 3 weeks. I lost one from starvation. I presume it was robbed last fall. My brick hives seem to do well this winter, and it was a hard one—last week 6° below zero; to-day the snow is 4 inches deep—hard bee weather. My bees were very heavy last fall. I have 24 colonies in the yard now.

ABE HOKE.
Union City, Ind., March 10, 1884.

Alsike Clover.

In answer to G. W. Morris' question in regard to Alsike clover, I would say that I have cultivated it for many years, and would advise Mr. Morris to sow it and furnish seed for his neighbors, if they will sow it. I have never known it to fail in honey, when the white furnished but little. I have known my bees to get honey from Alsike when they never visited the white. Alsike makes the best of hay, is good for pasturage, sweeter and better than any of the clovers, and is an excellent fertilizer. Has any one ever seen a case of dysentery in the far Southern States? As to the prolificness of queens, what Mr. Doolittle would cherish in his section, Mr. Benton would discard in his. There is nothing strange in this. Mr. Doolittle says: "Here we have but six weeks during the whole season in which the bees make any gain in honey;" and, of course, he wants plenty of workers to gather honey during that time. Here we have from May 10 (if the season is favorable) till Aug. 1, and from the last of August till frost. What kind of queen would Mr. Doolittle want for such a locality? We have an occasional failure in the fall, but Alsike has never missed yet. This season my bees will have 46 acres of Alsike, and by early pasturing with cattle and hogs, it will bloom till the last of August. My observation is, that what is good in one locality will be so only in sections where season, honey flow, pasturage and climate are the same. Let all give facts as existing in their localities; this will benefit many readers.

C. W. SAPPENFIELD.
Crawfordsville, Ind.

Wintered Successfully for 11 Years.

My bees have wintered safely. This now makes 11 successive years without a loss of a single colony, except a few from queenlessness.

H. H. FLICK.
Lavansville, Pa., March 7, 1884.

Bees in Georgia.

Our winter has been unusually cold, though bees have wintered well; and are now busy working on plum and peach bloom, and building up radidly. It is to be hoped that bee-keepers will reap a bountiful honey crop this year.

J. P. H. BROWN.
Augusta, Ga., March 11, 1884.

Bees Still Confined to the Hives.

Bees are still confined to the hives. There has not been a day since last November that has been warm enough for them to fly. I think they are wintering very well, though this I only guess at.

HENRY ALLEY.
Wenham, Mass., March 13, 1884.

Building up a Home Trade.

Bees, so far, are wintering pretty well considering the fact that we have had a very steady cold winter. Mine have only had two flights since Dec. 15, 1883. I have, up to this date, lost 3 out of 44 on the summer stands. I have had a good honey trade this winter, and I am doing all I can to build up a home trade in extracted honey. I have succeeded in getting our Fair managers to enlarge their premium list for next Fair.

W. H GRAVES.
Duncan, Ill., March 7, 1884.

[Building up a home trade is the most desirable thing to do. It not only consumes more honey, but gives the producer better prices.—ED.]

Bees Doing Well.

On Feb. 2 all the bees in Northern Ohio had a splendid flight, and are in the best condition possible. I have 21 colonies packed in buckwheat chaff; they have had no flight since Nov. 5 until Feb. 2. The weather is and has been very cold; often as low as 26° below zero. I have made inquiries of men who own an aggregate of 300 colonies, and have found but 4 dead colonies. Success to the Bee Journal; it comes to hand chock-full of news, and as regular as a clock.

W. S. Bair.

Bollersville, O., March 7, 1884.

[The Weekly Bee Journal ought to be regularly received everywhere, for we never vary an hour in getting all of them into the mails at 4 p. m., every Tuesday.—Ed.]

Not Progressive.

I have had bees for thirty or more years. I now have 70 odd colonies, all in "King" hives. Excepting 2 or 3 years I have obtained annually from 1,500 to 2,000 lbs. of comb honey in boxes weighing, when full, 20 lbs. net. Last year I had some larger boxes holding 25 lbs. I have been in the habit of shipping to my commission merchant in St. Louis, who generally obtained very fair prices, 12 and 18 cents per pound, with no loss, damage or trouble, for 2½ per cent. commission, and returns made quickly. This I considered doing pretty well, as I never had any more trouble with bees than to put them in hives as they swarmed; and two weeks afterward putting on boxes, and just before the first box was finished, raising it up and placing an empty one at the bottom. I rarely get more than two boxes from one colony. Have lost upon an average 3 to 4 colonies yearly from the moth; never any from outdoor wintering. Judging from the present weight of my hives, they now have stores sufficient to carry them through another winter. I never saw more than three queens; never gave a new queen to a colony; never knew of a colony being queenless; never tried to prevent swarming; and the wonderful stories I read of about manipulating bees and honey, confuse me. I cannot tell where or how to begin.

A. M. Curl.

Waverly, Mo., March 11, 1884.

Bees in Arkansas.

We are having the greatest overflow here since 1884, so say some of the old folks. I put my bees on a ridge that I never saw under water since I have lived in this country (which is about 14 or 15 years), and now the water is 2 feet deep under some of the hives. As soon as the water began to come upon the ridge, I raised the hives between 2½ and 3 feet, and so far I have lost only a few that fell into the water. The bees were working finely until a few days ago; the weather became cold, and with it a heavy rain fell. For near two weeks now they have not been able to do anything. When I want to see how they are getting along, I get into my skiff and rap on each, and it is answered by their buz; sometimes, if I give a second rap, the guards will come to the entrance to see what is wanted. They were wintered on the summer stands, and out of 125 colonies I have lost 4 or 5, and I think they were robbed. I was away from home one warm day, and on returning late in the afternoon, the robbers voices were the first thing I heard. On going to them, I found they had cleaned out two weak colonies. The maples, elms and peach trees were in bloom some 2 or 3 weeks ago, but we have had cold wet weather most of the time, and the bees have had but little chance at them. We hope the water will go down in a few days, and then the bees can come out in full force.

Chas. H. Kincade.

Sterling, Ark., March 7, 1884.

Educate the Customers.

Mr. S. Smith, on page 154, expresses my sentiments exactly. I have had the same question asked me probably over 100 times. When I would explain it to a customer and show him the extractor, how it worked, and all about it, I had no trouble to sell him extracted honey; but just so sure as it is offered in a locality where it is not known, they will raise the cry of "adulteration," glucose-sugar, etc. The uninitiated think, of course, it should sell for more than comb honey; they do not know the why and wherefore; so we must teach them. You, Mr. Editor, offer to help us out, in your foot note, and want to know who will take them? I can make good use of about 500, at the price you offer.

E. J. Scofield.

Hanover, Wis., March 10, 1884.

[The responses have been sufficient for us to announce positively that the Leaflet of two pages will be issued at once, so that orders may be sent in at any time. The prices will be: 200 copies for a dollar; 500 for $2.25; 1,000 for $4.00. When 200 or more are ordered at one time, we will print the honey-producer's name and address *free*, at the bottom. Less than 200 will have a blank in which the name and adress can be written. All by mail, post-paid, at the prices named.

Leaflet No. 1 is entitled, "Why Eat Honey?" It describes what pure honey is—explains how the bees place the comb in the sections—how pure honey is extracted from the comb, and why it can be sold at a less price than comb honey—shows the difference between "strained" and "extracted" honey—and explains the cause of candying, and how to liquefy it, etc. It is illustrated with a honey extractor, a section of comb honey and a pail of extracted honey. Samples are sent to all who have responded to our query—"Who will take them?"—Ed.]

Honey and Beeswax Market.

Office of The American Bee Journal, }
Monday, 10 a. m., March 17, 1884. }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the honey market. No change in the price of extracted honey, but there is an improvement in the demand. Comb honey is in large supply, and the best in 1 lb. sections brings no more than 16c. a lb. from store. Extracted, 7@10c.

BEESWAX—Fair demand, and arrivals are fair. It brings 28@32c. on arrival.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B Thurber & Co.

CHICAGO.

HONEY—Goes off slowly, and prices are lower on sections that are imperfectly filled. The demand seems to be chiefly for lots that are fancy in appearance, and in every way perfect sales are made of 1 lb. sections at 15@20c.; 1¼@2 lb. sections, 14@18c.; dark and mixed in color, very slow, at about 12@13c. Extracted honey steady, but limited demand; prices range from 7@10c. per lb.

BEESWAX—Scarce, at 28@35c., according to color and cleanliness.

R. A. Burnett, 161 South Water St.

KANSAS CITY.

HONEY—Receipts of comb honey quite liberal, and prices lower. Choice white 1 and 2 lb. sections, 16@17c, with probability of still lower prices. Dark and irregular combs, 10@12c, and slow sale at that. Extracted dull at 8@10c.

BEESWAX—None in this market.

Jerome Twichell, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Reports from the bee districts are to the effect that the prospect is excellent for a heavy yield, the only discouraging news being the loss of a good many bees which were located in the bottoms of canyons, and were washed away by the freshets. Market is inactive. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@16c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 33@33½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market has been dull with us during the month of January, but the past week it has been better, so that stocks are again reduced. Choice white 1 lb. in good order, sold at 18 cts.; the same quality when broken sold at 16c.; 2 lb. best white, 16@17c.; second quality, no sale. Extracted as usual, not at all wanted in our market.

BEESWAX—In great demand, but no supply; nominally 30c. per lb.

A. C. Kendel, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. Crandall, *Sec.*

☞ The Western Michigan bee-keepers, will hold their spring meeting at Berlin, on April 24.

F. S. Covey, *Sec.*

Bee Pasturage a Necessity.—We have issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for ten cents.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Italian Bees and Queens For Sale.

Tested Queens, May, $3.00; June, $2.50; after July 1, $2.00 each. Untested, after June 1, $1.00; 6 for $5.40. Full colonies in May, $7.00; 2 for $13.00; 10 for $60.00. After June 1, $1.00 less each colony. Satisfaction guaranteed. I. S. CROWFOOT,
12A8t Hartford, Wis., April 1, 1884.

HELP WANTED,

To handle Bees this season. Address, with terms, etc., **E. DRANE**, EMINENCE, Henry Co. KY.
12A2t

ITALIAN QUEENS, DADANT FOUNdation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

WANTED—A mechanic to assist in apiculture, Wages according to knowledge of both industries. Reference exchanged. Call at this office, or address R. J. ADAMS, Lakeport P. O., Chicot Co. Ark. March 3, 1884. 11A2t

The Bee-Keepers' Guide;

Or, MANUAL OF THE APIARY.

10,000 SOLD SINCE 1876.

11th Thousand Just Out!

10th Thousand Sold in Just Four Months!

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
47D10t 18C7t LANSING, MICH.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DR. FOOTE'S

HAND BOOK OF HEALTH,

HINTS AND READY RECIPES.

Is the title of a very valuable book that gives a great amount of information of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malaria Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sunstroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail post-paid, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.
4A1y

BASSWOOD, MAPLE AND ELM TREES, 2 ft. and under, $2 per 100; 2 to 6 ft., $6 per 100; 6 to 10 ft., 10c. each. N. E. DOANE, Pipestone, Mich.
11Dtf

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.

MRS. FRANCES DUNHAM, De Pere, Wis.
Dear Madame:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.
Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.
Dear Madame:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.
All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.
Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNHAM: Kenton, Ohio, Dec. 29, 1883.
After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.
I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to
FRANCES DUNHAM, De Pere, Wis.
2Btf 6D6t

NEW Vegetables
A Specialty.
GREGORY'S SEED CATALOGUE
1854.-1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all.
JAMES J. H. GREGORY, SEED GROWER, MARBLEHEAD, MASS.

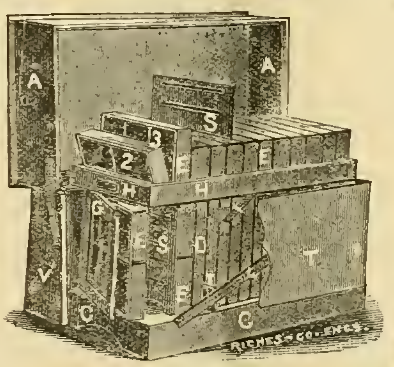
Bees for Sale!

One hundred Colonies in Langstroth's Improved two-story Hives, made of good Poplar Lumber, "painted," 10 full frames each, in good condition. Will sell in quantities to suit purchasers. Hives in order on cars. For further particulars apply to or address,

J. W. HOWELL, Kenton, Tenn.
11A2t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1876. CROWN 1882.



The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, **ELVIN ARMSTRONG,**
Prop'r. of the Crown Bee Hive Factory and Apiary,
JERSEYVILLE, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Italian Bees and Queens For Sale!

Send 25 cents (one cent stamps) and get our Book on BEE-KEEPING.

Address E. P. BAKER,
10A8t Box 342, DES MOINES, IOWA.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,
12A8t 4B4t AUGUSTA, GA.

ALLEY'S

Drone Excluder, Queen & Drone Trap

COMBINED.

Sample, by mail, 65c.; by express, 50c. In the flat, per dozen, including one made for model (13 in all) $3.00. Send for our 23d annual Circular and Price List of Queens and four races of Bees.

Bee-Keepers' Handy Book, bound in cloth, by mail, $1.00.

HENRY ALLEY,
9Atf **WENHAM, Essex Co. MASS.**

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
32ABtf **J. VANDERVORT, Lacyville, Pa.**

BEE-KEEPERS, before ordering your

APIARIAN SUPPLIES

Send for our large Illustrated Catalogue, sent free to any address.
10A24t **E. KRETCHMER, Coburg, Iowa.**

FOR SALE CHEAP.

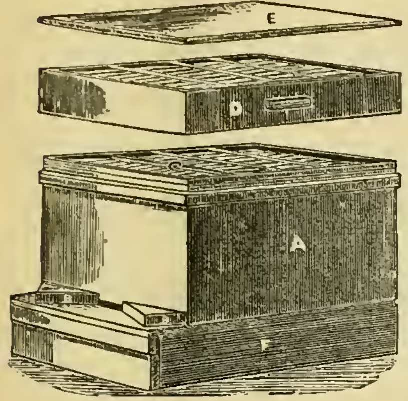
BEES! BEES!

Having more Bees than I can well handle, I wish to sell 100 Colonies immediately. I use L hive.
12A4t **E. DRANE**, EMINENCE, Henry Co. KY.

SEND YOUR NAME AND ADDRESS FOR MY 20-page Price List of Italian, Cyprian and Holy Land Colonies, Nuclei, Queens and Apiarian Supplies. H. H. BROWN, Light Street, Col. Co. Pa.
12D4t 4B1t

1868. 1884.

HEDDON'S
COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

BEE-KEEPERS'
SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax, the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS!

The present prices are as follows:

White Clover, $15.00 per bushel, $4.00 per peck, or 30 cts. per pound.

Alsike Clover, $12.00 per bushel, $3.25 per peck, or 25 cts. per pound.

Sweet Clover, $10.00 per bushel, $2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE
For Brood Frames.

One ounce spools, each, - 4 cents. Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents. Postage, 13 cents extra.

One pound spools, each, 40 cents. Postage 18 cents extra.

One pound will wire about 175 frames.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,

923 West Madison Street,
CHICAGO, - - ILLINOIS.

American Linden or Basswood
FOR BEES!

5 to 10 inches, per 100......................$1.50.
3 to 5 feet, per 100.......................... 7.00.

For sale by **Z. K. JEWETT**, SPARTA, WIS.
12A6t 4B2t

REDUCED PRICES!

All one-pieced Boxes and 4-pieced, 4¼x4¼, per 1,000, $4.25; 5¼x6¼, per 1,000, $4.75. And HIVES proportionally cheap. Send 5 cents for sample and special Price List.

J. P. McGREGOR,
10D2t 4B1t FREELAND, Saginaw Co. MICH.

Bees! Queens! Nuclei!
INSTRUCTION IN BEE-KEEPING.

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

QUEENS.—I breed Queens by the best methods, and from the best stock. Queens ready after May 20th. Untested, $1.00; tested, $2.00; selected tested, $3.00.

NUCLEI, with untested Queen, $3.50; with tested Queen, $4.50; with selected tested Queen, $5.50.

INSTRUCTION.—July 7, 1884, I shall begin instructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address, **O. CLUTE,**
10Dtf IOWA CITY, IOWA.

Pure Italian Bees and Queens!

Send for Price List to
A. B. MILLER, Wakarusa, Elkhart Co., Ind.
7D6t

Bees For Sale!

Thirty colonies at $5.00 each, in lower Langstroth hives, in order on cars.
9D3t Dr. WM. M. ROGERS, Shelbyville, Ky.

BE SURE

To send a Postal Card for our Illustrated Catalogue of APIARIAN SUPPLIES before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.

J. C. SAYLES,
51D15t 1B5t HARTFORD, WIS.

HEDDON HONEY CASE,

Ready to nail, per 100, $15.00. Hives cheap and good. N. E. DOANE,
8D6t PIPESTONE, Berrien Co. MICH.

SMITH & SMITH

Wants to give away 5,000 of their Illustrated Catalogue and Price List of **Bee-Keepers' Supplies. Special Attention** given to the

Simplicity One-Piece Section.

Also Hives, Smokers, Foundation, etc.

SMITH & SMITH,
6D10t KENTON, Hardin Co., OHIO.

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

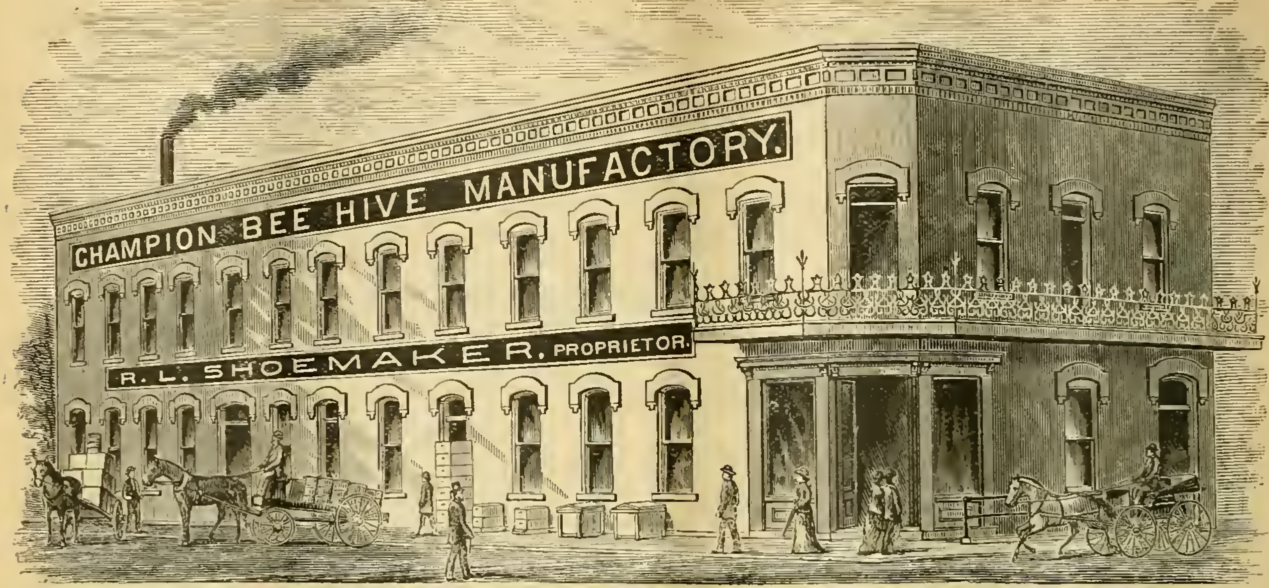
ITALIAN BEES AND QUEENS.

Send for Price List to
D. B. BROWN, DES MOINES, IOWA.
10D7t

BEE HIVES!

Simplicity, Langstroth and Chaff Hives, Section Boxes, Brood Frames, and Comb Foundation. Send for Price List. The successors of A. B. Miller & Son.

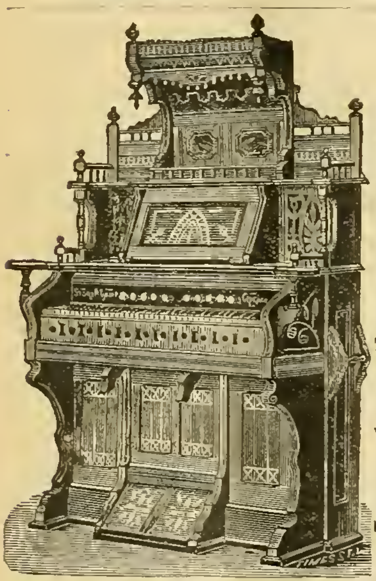
MILLER BROS.,
51D8t NAPPANEE, Elkhart County, IND.


CHAMPION BEE HIVE MANUFACTORY.
R. L. SHOEMAKER, PROPRIETOR.

All Bee-Keepers wanting HIVES OR SECTIONS of any kind, and in any quantity, will confer a favor by sending for my Price List (Price List Free). Direct

CHAMPION BEE HIVE MANUFACTORY,

R. L. SHOEMAKER, Proprietor. Newcomerstown, Tuscarawas Co. Ohio.



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
Mathushek,
Simpson & Co.,
Story & Camp.

Estey,
Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street, CHICAGO.
203 N. Fifth Street, ST. LOUIS.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

EARLY CHOICE QUEENS

TO BREED FROM,

From April 20th to June 1st. Prices upon application.
HENRY ALLEY,
10A3t WENHAM, Essex Co. MASS.

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t H. C. WHITE, MADISON, IND.

A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

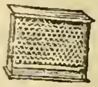
Address, DR. G. L. TINKER,
44Atf NEW PHILADELPHIA, O.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,

Langstroth Bee Hives, Honey Sections, etc.

Apply to C. F. MUTH,
976 and 978 Central Ave., CINCINNATI, O.

☞ Send 10c. for Practical Hints to Bee-Keepers.

OLDEST BEE PAPER IN AMERICA
ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861. Chicago, Ill., March 26, 1884. VOL. XX. No. 13.

THE WEEKLY EDITION OF THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,
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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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☞ Letters for publication must be written on a separate piece of paper from items of business.

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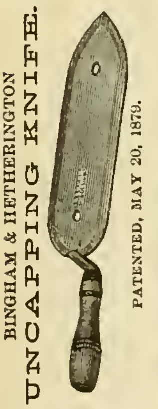
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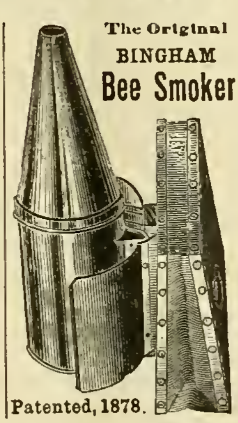
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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.**, postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition. **5c.**; per dozen, **40c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

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The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25.**

King's Bee-Keepers' Text-Book, by A. J King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.25; for 200 colonies, $1.50.

Deutsche Buecher,

Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände —Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellüng über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Arſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., MARCH 26, 1884. No. 13.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Caution to Beginners.

Since Huber opened out the combs of the hive "like the leaves of a book," to the inspection of the bee-keeper; and since Langstroth placed these combs into frames so that they may be handled, and the whole hive may be spread out for inspection from end to end and top to bottom, at any moment the operator may desire;—since then progress and improvement have followed each other and made rapid strides toward that perfection to which we are ever pressing on, but never attain. These facilities for inspection place before beginners a temptation to make a "toy" of the hive, and upon every occasion to "play" with and open it. We want to impress them with the idea not to disturb the bees except when it is essential to do so. To be continually opening the hive in the spring often exposes the brood to a "chill," and brings destruction to the colony, and does no good whatever. This "chilled brood" is sometimes the forerunner of "foul brood" so much to be dreaded by every bee-keeper. We, therefore, strongly advise *caution* in this particular to all novices.

An exchange very wisely gives this advice: "Whether chilled brood will eventually bring about the fell disease, "foul brood," depends on various circumstances; but whether or not this be the case ultimately, a whole neighborhood is endangered by a reckless owner of hives. We would, therefore, attempt to impress on all young bee-keepers the great care they should make it incumbent on themselves to take as to the manner and time of overhauling their hives, and this advice especially applies to this season of the year."

Bee-Keeping in Canada.

The growth of the bee interests in Canada is quite remarkable. Two things have been instrumental in its rapid development. First, the energy and push of Mr. D. A. Jones, and his efforts, in connection with Mr. Frank Benton, to procure the Bees of the Orient, and bring them to America for development and improvement; and secondly, the encouragement received by bee-keepers from the Toronto Fair, and the large premiums offered on bees and honey. The result of this was to "astonish the natives" with an exhibit, which was perhaps the largest ever made on American soil.

No wonder, then, that a late number of the *Free Press*, published at London, Ont., should remark that "there is a growing interest throughout Western Ontario in the matter of bee culture, and if the directors of fairs, and especially those of the Western Fair, were to give greater encouragement to exhibitors, the public generally would learn more of the extent and value of the yearly honey yield."

Then, as to the production of honey in Canada, the *Free Press* adds: "A colony comprises from 20,000 to 40,000 bees, and, under proper management, each of these should produce two new colonies every season. The character of the season has, of course, a good deal to do with this. As to the yield, it may be roughly stated that each colony should produce from 60 to 100 pounds of honey, according to the favorable character of the season; and, at the present time, such a production would represent a vast profitable result to the owner.

It is very certain that a liberal Premium list draws together exhibits, which, when aggregrted, make a magnificent display. These, in turn, create a demand for honey, among the masses, for general consumption, that is more than paramount to the increased number of bee-keepers. These astonishing displays are wonderful educators of the people, and it should be bourn in mind that it is to the interest of bee keepers generally to have them at every Fair, in every County, State and Province in America. Let the display at Fairs for 1884 be of such magnificence as to create a market for honey ten times as great as it ever has before attained.

The committee having in charge the matter of legislation against the spread of "foul brood" in Canada, has had a "set back." They were met with a refusal to introduce the bill into parliament.

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

O. Clute, Iowa City—4 pages—Bees, Honey, Bee-Keepers' Supplies, and Class for Students of Apiculture.

Bright Bros., Mazeppa, Minn.—24 papes—Apiarian Supplies.

Dr. J. P. H. Brown, Augusta, Ga.—20 pages—Italian Bees, Queens, and Bee-Keepers' Supplies.

Nellis' Floral and Garden Instructor—58 pages—Mohawk Valley Seeds, Canajoharie, N. Y.

Wm. C. Wilson, 45 West 14 Street, New York—116 pages—Plants and Seeds.

☞ We have received a copy of a pamphlet entitled, "a Dictionary of Baptismal Names for Children." It contains 2,000 names with their meaning, and the countries from which they originated. It is published by John C. Stockwell, 25 Ann Street, N. Y., and the price is 25 cents.

☞ Cook's Manual in cloth and the Weekly BEE JOURNAL for one year will be sent for $3. We have no more of the old edition left, and, therefore, the club price of that edition at $2.75, is withdrawn.

☞ We now club the *British Bee Journal* and our Monthly for $2.50.

CORRESPONDENCE

Read at Belleville, Ont., Convention.

Spring Management of the Apiary.

ALLEN PRINGLE.

Hitherto wintering has been considered the greatest obstacle in bee-keeping. But the difficulties of successful wintering are being gradually overcome; so that the experienced and intelligent bee-keeper, with proper facilities, can count, with a fair degree of certainty, upon being able to bring at least a large proportion of his colonies safely through the winter. But, owing to certain changes which the seasons are undergoing, a comparatively new difficulty has lately arisen, to supplement, as it were, the wintering problem.

This difficulty is, after the bees have been successfully wintered, to get them safely through the spring to the honey season, and have them ready for the honey flow when it arrives. From some causes, planetary or otherwise, the character of the seasons is undoubtedly changing; and as we cannot alter the face of Nature, we must, as far as possible, adapt ourselves and our bees to Nature's moods and variations.

Last spring, especially, was a very exceptional one; indeed, the whole season through seemed to be quite out of joint. The spring and forepart of summer were so cold and wet that the poor little bees suffered much; and many of those not specially cared for and protected had to succumb. So far as I could learn, there was greater mortality among the bees in Canada, last spring, after they were taken out of winter quarters than there was during the winter. For my own part I lost none at all in wintering; but lost 3 or 4 colonies in the spring, in spite of the most assiduous attention to them. Only 2 of these, however, succumbed to "spring dwindling"—the other 2 having lost their queens. But so very unpropitious was the spring, and also up to the middle of June, in this district, that had I not given my bees extra attention and proper treatment, I am satisfied I would have lost the most of them. Doubtless some of you had a similar experience.

I have, therefore, thought that this question of spring management is the most important one for our consideration at this meeting. Our bees are now fixed up in various ways for the winter. Whether the manner of their disposal in winter quarters has been wise or otherwise, it is past; and our next proceedings with our "little pets" will be in connection with the spring management.

The question is, "What ought the spring management to be?" In answer to the question, I propose to give my own views in the matter, subject, of course, to the criticism of others of you who may have had larger experience than myself. My own experience with bees has covered, altogether, about 20 years; yet I have much, no doubt, to learn. We all, perhaps, can still learn, no matter how much experience we have had, or how many books we have read. We have, it is true, our standard works. We have Langstroth, and Quinby, and Cook, and Newman, and Dzierzon, and others; but I have noticed one thing here, which is this: In a progressive system like bee-culture, the best and latest books on the subject get *left behind*, especially in practical details. They may not be left behind in principles, so far as they contain principles, for first principles never change. But it sometime happens in bee literature, as in other departments, that theories are adopted as principles before they are fully verified by facts and experience. In such cases oftentimes mere hypotheses have ultimately to yield to the stubborn facts of practical experience.

In the spring management of an apiary, there are some 2 or 3 paramount objects the bee-keeper ought steadily to keep in view, and endeavor to accomplish. The first is to preserve his bees from what is called "spring dwindling." The second is to get them in good strong condition by the time the first honey flow comes, so that they can duly take advantage of it. And the third is to make such provision for early queens and good drones as he may deem requisite.

As to the spring dwindling, it seems to be a fact that the bees wintered in cellars and bee houses are more liable to it than those wintered outside, properly protected. And here a mistake is, I think, often made in setting out the bees wintered inside too early. A colony well wintered and strong is not apt to dwindle in the spring if it gets anything like fair treatment. Do not not set them out too early; keep them thoroughly warm after they are set out; and feed judiciously of both pollen and honey, and you will reduce the spring dwindling to a minimum. The best time to set them out must, of course, much depends on circumstances, and the bee-keeper must use his own judgment.

I do not think it prudent to put them out for good much before the first natural pollen appears, especially if the spring is cold and backward. If, however, they get restless in their quarters, and dysentery should appear, they ought to be put out for a flight the first day that is sufficiently warm and fine. They can then be carried back again. But as pollen is required for the rearing of brood, in some cases where there is little or no old pollen in the hive, the colony might do better out if well protected and managed; for in such cases the artificial pollen for breeding can be more easily supplied them outside than in. I would, therefore, other things being equal, put the colonies with *least* old pollen out first, and keep those with *most* pollen in the longest. But how can I know how much pollen they may have in the spring before I put them out, you ask? Note the fact in the fall.

If bees are kept warm enough during the winter, and have plenty of honey, they will not use pollen until they begin to breed. If they are cold, and have to move about and exercise their wings to keep warm (for they do this), they will need nitrogenous food, and will then eat pollen. But even in view of this contingency, colonies with no old pollen may, if desired, be left in the cellar after breeding has commenced. The nitrogenous food, to supply the albumen for the eggs and the pollen for the brood, can be fed inside the hives in the shape of meal cakes soaked in honey; but it is better, I think, to feed the raw meal outside in the open air when the weather is fine. No definite or invariable rule can be given as to *when* to set out colonies, or *what* colonies to set out. The thinking and observant apiarist must consider all the circumstances and judge for himself. A good plan is, to have a strong colony out pretty early, and when it begins to carry in natural pollen the rest may pretty safely be put out.

If, however, we cannot give the inexperienced bee-keeper very definite instructions as to the exact time to put his bees out in the spring, we can give pretty explicit directions how to manage them after they are out. And the bee-keeper's season's crop of honey will depend largely upon his spring management of his bees. If this part of his work is wisely and skilfully conducted, his chances for an abundant return, other things being equal, will be good; if poorly managed his chances are slim; for the bee-keeper who does not know or care to manage his bees right in the spring will not know or care to manage them properly during the honey season. To be successful as a bee-keeper, his enthusiasm and care must reach beyond the inspiring honey season, and extend through the whole year.

Now, the very first thing to be done with the bees after they are set out in the spring, is to make them warm by closing all ventilating and other holes except a very small entrance; putting warm quilts on top; and taking such other measures as may be necessary to prevent the undue escape of heat from the hive, always bearing in mind that our protection does not *create* heat at all, but simply confines the animal heat which is generated by the bees. In the warm days when the sun is strong, there is, of course, *external* heat; but in cold windy days, and especially when the atmosphere is humid, the escape of the animal heat from the hive, unless it be well protected, is very rapid and very injurious to the bees. Every avenue and crevice ought, therefore, to be tightly closed except a very small entrance. In the spring, remember we want no "upward ventilation," as that matter will, in the open air, take care of itself—we want *heat*, or rather the bees and brood need it.

Having thus duly attended to this first spring requisite, the next thing to do, the first sufficiently warm day, is to overhaul every colony and clean out dead bees, etc. Also take away all superfluous combs, and crowd the bees up into as small a space as necessary by means of division-boards. If the colony is weak, two or three of the best frames are sufficient to leave with it; and sometimes even one frame is enough at first for very weak ones. I have very little faith in *uniting* weak colonies in the spring, especially at this early season. I never unite in the spring except, perhaps, to get rid of a poor queen. My experience is decidedly against the practice, that is, when the weak colonies are properly handled. Having crowded the weak colonies up into small, warm quarters upon one, two or three frames, the stronger ones and strong ones may, of course, be given more room and frames, from three to a dozen, depending upon their strength and condition.

During this overhaul of the hives, note should be made of two or three important matters, and careful record made of them, so that the hives need not be opened any oftener during the cold, spring weather than is absolutely necessary; for I regard frequent spring openings of the hives as a very bad practice. Besides the danger of chilling the young brood, there is another serious objection to to this practice. At such a season, especially in bad weather, it not infrequently happens that the disturbance caused by overhauling a hive, causes the bees to "ball" and kill their queen. I have known such instances. In the honey season, when the bees are gathering freely, you can knock them about almost with impunity with no bad results; but at all other times they ought to be handled with the utmost care. The one necessary spring overhaul should, therefore, be done with great care, but with dispatch, so as not to expose them too long; though the first opening in the spring seems never to disturb the bees as much as subsequent openings.

The two or three matters to be noted and recorded at this time are: First, is the queen all right? Second, how many bees? Third, how much honey is left in the hive? Fourth, is there any old pollen? And finally is there any young brood, or has the queen commenced to lay? These points can be all noted in your apiarian register, or simply upon a piece of paper left under the cover of each hive. You can then tell at any time, without opening the hive, what its condition was at the time of examination.

To illustrate the importance of this matter: Suppose just after the natural pollen season has commenced, and the bees, some of them, are freely breeding, a cold, rainy spell of weather comes on, lasting for a week or longer, as sometimes occurs, and the bees cannot get out with safety. The colonies that are breeding and short of pollen will undoubtedly suffer more or less; and part of the brood will perish unless the bees are fed the artificial pollen within the hives. This very thing happened last spring. At a time when the bees were breeding more or less, and natural pollen had appeared, there came a week or ten days of very bad weather in which bees could not go out to forage without being, many of them, lost. In such a dilemma the breeding colonies short of pollen must be supplied with it or a portion of the brood will perish; and the bees in their desperation will go out in search of it and also perish. Now, the hives cannot be opened with safety in such weather to see which need assistance; but the aforesaid memorandum can be consulted, and all that are supposed to be short of pollen can be supplied. I simply take a cake made of barley or rye meal, or linseed cake meal, and place it over the bees on the frames under the quilts. This can be done in a moment or two without chilling the brood.

During the fine days of spring, just after the bees are set out, and before there is much natural pollen, nitrogenous food may be fed in the open air near the hives. Of such food the very best is cotton-seed meal, which is richer in nitrogen than the other kinds of meal. Next comes linseed cake meal, and next bean meal. In the absence of any of these, wheat, rye, pea, or corn meal may be used. Spread the flour or meal out on flat dishes or grain bags, and expose it in the warm sun near the bees, and you will see the busy little fellows fairly revel in it! If you put out different kinds, as I have often done, you will notice that they will literally swarm upon the kinds richest in nitrogen.

One prominent American bee-keeper has, I am aware, "gone back" on the spring feeding, declaring it useless, and that he will feed no more; but it would take a much stronger argument than that to induce me to abandon the practice. Let us look into the merits of the matter for a moment. Take, for instance, a strong colony of bees wintered outside, and with little or no old pollen. As soon as the warm days of April come, and before the natural pollen appears, the bees begin to fly out and forage about in quest of *nitrogenous* food; for, bear in mind the queen, in order to lay, must have albumen, and the young brood must have pollen. Now, unless the nitrogenous food be supplied them, either inside the hive or outside, the queen cannot lay freely, the brood cannot be reared, and the colony can do little or nothing until the natural pollen appears. Meanwhile the old bees are dying off; and this is "spring dwindling."

Before the young bees, so lately started, are fit to carry on the operations of the hive, the old bees are perhaps all gone, or nearly gone; for it is well-known that as soon as an old bee begins to exercise freely on the wing, in the spring, his "pilgrimage in this world" becomes very short. And the worry of looking in vain for pollen is not calculated to delay the "shuffling off." In such a case, especially if the colony is not strong, the old bees disappear before there are young ones to take their places. This, in my opinion, is one of the principal causes of the much dreaded spring dwindling.

There are, it is true, under ordinary circumstances, few colonies but have some old pollen, more or less, in the spring to go on with until the new supply comes in. But if Mr. Heddon's theory that pollen in winter is the prime cause of dysentery, has any truth in it, and is practically acted upon to any great extent, there will be many colonies from which the pollen has been removed in the fall, and hence *minus* pollen in the spring. All such, unless supplied with nitrogenous food in the early spring, could do nothing but dwindle.

I, therefore, maintain from these premises that spring feeding both of sweets to stimulate the queen, and of nitrogenous food to supply the albumen for the eggs and the pollen for the brood, is beneficial, and, withal strictly scientific rather than empirical. At the same time I freely admit that spring feeding and stimulation are sometimes attended by at least one evil; and must, therefore, be done with judgment and careful attention.

The evil is this: The daily feeding of sweets and pollen in the early spring sometimes has the effect of misleading the bees in regard to the season and weather. From this regular supply of the good things they conclude for certain that the honey season has commenced. Consequently they are apt to sally forth to work in bad, unseasonable weather, and many may get lost in this way. It is well, therefore, to shut them in on cold, windy days, and give them a nibble of cake and honey to keep them busy, and to keep the queen at her post of duty. The regular feeding should be done in the evening. As the spring advances and the weather gets warm, with increase of young bees, each colony must get more room and more comb. Keep the queen busy by supplying her with a frame of comb from time to time. Take a frame with some honey at the top and empty comb below (I speak here of the deep frames), scrape the caps off, and place it in the centre. But in enlarging the space of each colony, and supplying additional frames of comb and honey, we must be careful to "make haste slowly." Do not go too fast. It is very easy to make a mistake here, especially if the weather is cool. Use your best judgment. And in taking out frames of brood from the strong colonies to reinforce the weak, never give much brood at once to a weak colony. If you do you will feel the pain and mortification of finding your nice frame of brood lost. The handful of bees, not being able to protect the brood, it perishes.

Years ago I made that mistake, but have got over that as well as other errors. Experience is the best school, but the tuition is high, the expenses sometimes heavy. But this plan of building up the weak colonies in the spring at the expense of the strong is not, by any means, an unmixed good. There is this one evil about it which, no doubt, some of you have experienced. It sometimes happens that in robbing the best colonies to build up the others so as to get them all strong by the time the honey flow comes, you find when it does arrive that instead of having all of them fit for good work you have all in fair condition, but none at all in first-class order to take advantage of the flow.

This is a great mistake, and entails great loss. You might far better have a portion of your colonies strong and in first-rate condition to work when the flow comes, and the rest simply able to go on nicely without giving you any surplus, than to have all in fair condition, but not able to give you much surplus. And a portion of them would be in first-class order when needed, were they not systematically and unscrupulously depleted to build up the others. No watchful bee-keeper will be apt to make this mistake more than once. Here, again, experience is salutary but dear. Of course in calculating beforehand, in the spring, how long it will be before your young workers will be needed for action, it is hard to hit the mark every time; and we do not care to have to feed a lot of idle bees for two or three weeks before the battle commences.

Knowing the time from the egg to the perfect bee, and also the time your young bee hangs around the house and chores inside before it goes to work outside, you may add these times together and calculate (as you may think) with mathematical certainty just when to urge your queens up in laying; and, after all, Nature, in her freaks, may sell you in the most ridiculous fashion! We had a realizing illustration of this last season. The fruit bloom was abundant, indeed super abundant, and rich in the coveted nectar; but when did it come? Why, about two weeks or more after the usual time. So you see the bee-keeper must keep his "weather eye" open in the spring on Dame Nature as well as on his queens, or he will surely get "left," with all his bee-lore. In bee-keeping, as in almost every other avocation of life, "eternal vigilance" is the price of success.

Selby, Ont.

[The report of the Convention will appear in our next.—Ed.]

For the American Bee Journal.

Size of Brood Frames.

W. J. DAVIS.

About two years ago I gave a description (in the Bee Journal) of a brood frame I was using by way of experiment, with a view of adoption in case results proved satisfactory. I was not at the time aware of the fact that so many bee-keepers were looking for better returns from their bees by the use of a shorter brood frame. The size I chose was 11½x8½, inside measure, with a 14-inch top-bar. I am so well pleased with their use, that all the hives I now make are for frames of that style. Have tried from 8 to 12 frames per hive. For my home apiary I prefer 8 frames.

The reasons for my preference of short brood frames are these: 1. The better clustering of a colony for winter; that is, less unoccupied space at the end of the frames. As bees in this latitude must resist the cold for 7 months in the year, this consideration should not be over-looked.

2. As I secure my surplus comb honey above the brood nest (not at the side), the bees are forced to enter the surplus boxes at the beginning of the honey harvest.

3. As every square inch of nice worker brood comb represents that amount of capital in the hands of the bee-master, and the amount should not be greater in any one hive than can be used to the very best advantage; and any store comb or drone comb above a very limited amount is a positive damage in the brood nest.

4. Greater ease in equalizing colonies in spring and summer, and equalizing stores in autumn. Other reasons might be given, but the above will suffice for the present.

Some, I have no doubt, are ready to say, such a hive is altogether too small and bees would not secure a winter supply of honey. With improved bee-culture it does not matter whether they do or not, if they give a satisfactory amount of marketable honey. But in point of fact and actual experience, I find small hives, quite as likely as large ones, to contain sufficient stores for winter. Another, probably may say such small hives could not have a strong working force by the time white clover blooms. Let us see; a colony of bees can better warm a small hive in early spring, and, hence, can surely breed as fast as in a large hive.

In this locality we have no need of a strong working force before June 10, which is the time the white clover begins to bloom. Let us suppose a hive contains 8 combs of above size, on May 1, and each comb contains 98 square inches, or say 780 square inches of comb in the hive; each square inch contains 50 cells, or 39,000 cells in the hive. Let us allow one-half for pollen and honey for immediate use (which is a very large estimate for the month of May, including a reasonable amount of drone comb), and we still have room for the production of 19,500 worker bees every 20 days, or nearly 1,000 per day. It will readily be seen that a small hive will be crowded with bees much earlier in the season than a large one.

In accordance with a suggestion of one of your correspondents (which, I think, a good one), I will say that I have handled bees for over 35 years, in the same locality, and with an average of about 100 colonies. Have used the standard Langstroth frame for 23 years. Have used from 8 to 24 frames to the hive. Have 50 hives that take 12 frames in the brood-chamber, and can add 12 to an upper story of the same hive for extracting, or in place thereof two sets of surplus frames. I have my bees now, about one-half of them in long (Langstroth), and the balance in short (Langstroth) frames.

I cannot agree with Dr. Tinker that all brood frames not of a certain length should be called by some other name than the Langstroth. If I understand it aright, the main features of the Langstroth patent consisted of separate comb frames resting on rabbets, with small space above, and at ends of frames. I could not tolerate any hive with close fitting top-bars, or without the shallow space above the frames. In the matter of brood frames, I am in favor of every man using such size as he pleases. In the controversy between Mr. Demaree and Dr. Southwick, I think, for his latitude, the Doctor has the argument on length of frame, and Mr. Demaree on the depth, for any latitude.

Youngsville, Pa.

For the American Bee Journal.

Use Separators? Yes.

H. D. BURRELL.

For four years I have made a speciality of honey production, keeping an average of about 100 colonies, spring count. These have produced in that time over 23,000 pounds of surplus honey, mostly comb. Separators were used with about half the amount; hence, I have had ample opportunity to judge which is the better way. The old argument (not often heard now), "separators take off one-third the honey crop," was long a stumbling block with me. I labored long and faithfully to persuade myself that I could do without separators, but signally failed. Different locations, seasons, races of bees, sections and methods of management all have an influence, and must be considered in examining the subject. I have experimented long and carefully, and on a large scale, during eight years' experience with bees, to determine the facts. Have used wide frames holding sections both one and two tiers deep, and cases and racks of many patterns; sections 1½, 1⅝, 1¾, 1⅞ and 2 inches wide, holding from 12 ounces to 2½ pounds of honey.

This season I shall use no sections without separators, although I have quite a stock of one-pound sections on hand 1¾ inches wide. That separators reduce the honey yield at all, I have been unable to discover. But I have found that where separators are used the honey cappings are whiter, and not nearly so many combs are soiled, many of the bees, I suppose, walking on the separators instead of on the honey.

The main objection to using separators, in my opinion, is their first cost, but this is far outweighed by the greater ease with which separatored sections can be manipulated, the projecting wood side pieces protecting the combs. This is an important item where inexperienced and often careless help has to be employed; also in the wholesale honey house. Buyers or salesmen usually draw sections for examination from different parts of the crates of honey on sale, and not very carefully either. If combs are bulged, broken cappings and leaking honey result, and those crates are not wanted. Often I have watched this tableaux in wholesale houses. Honey stored between separators will meet with fewer accidents, causing leakage, and give better satisfaction to retailer and consumer.

What an unsightly object a crate of leaking honey is! It is much more convenient to retail sections of honey by the piece, than to take time to weigh each one, and they are sold largely in that way. When separators are not used, the sections vary so much in weight it cannot be done. Then the smooth, symetrical snowy blocks of semi-transparent honey, which fairly make the mouth water, look far more attractive than the irregular, warty, bulged or hollowing ones, and meet a more ready sale. Many a time have visitors in my honey room pointed to these blocks in a pile of less even sections, and exclaimed, "What a nice one that is!" I think I have never had 50 sections which could not be crated for shipment, but I can crate the separatored ones twice as fast as those not separatored.

The leading honey dealer of Chicago told me he would far rather sell separatored honey. Buyers are constantly becoming more discriminating, and I predict that soon separatored honey will sell quicker, even if it does not bring more money—quite an item in our overstocked markets. Even here in the West, where the market does not call for glassed sections, time will tell that it pays to use separators.

I use a section case, and practice a system similar to Bro. Heddon's well-known and deservedly popular one. Have used the Heddon case largely with individual tin separators for each section. This necessitates much labor and expense, but I should certainly follow that plan if there were no better one. I will not use wide frames. They are an abomination. Last year I used about 150 cases similar to the Heddon case, but in which the partitions are omitted and the sections held in place by narrow band-iron supporters across the bottom of the case. This case allows the use of separators, separators of wood 1-16 inch thick were used to give entire satisfaction in these cases. I prefer them to tin. The same separators tacked to wide frames I do not like.

In the modified Heddon case they are fastened to nothing permanently, and when not in use are piled up out of the way, and no warping or splitting occurs, though they are pared from basswood logs in a berry box factory. Not being tacked to a frame, propolis is easily scraped from them. Bees seemed no more inclined to attach comb to them than to tin separators. Indeed, I have been annoyed more by bees building into and attaching combs to the sides of adjoining narrow sections where no separators were used. I carefully set all hives with a level, too. (No cases or separators for sale.)

I have found the chief advantage of separators in my method of using surplus section cases. They are tiered up in the usual way until ½ to ¾ of the sections in the upper case are finished. Then the case is quickly and easily cleared of bees and carried to the honey house. Here, away from robbers and angry bees, the case can be manipulated when convenient. The unfinished sections, being straight and regular, are easily placed in cases and returned to the bees. By this plan combs are seldom soiled by remaining too long with the bees, and fewer cases are in the hive at a time, thus concentrating the work of the bees and enconomizing the heat of the hive. By this plan, too, more sections are finished, and fewer unfinished ones are left at the close of the season. I find that usually where cases are tiered up more than two high, work goes on very slowly above that point. Especially is this true during the cool nights of late summer. More time is usually required to get the last half dozen sections in a case finished, than all the others.

Where separators are not used, it is a vexatious, tedious task to return the unfinished sections to the bees. If they are not perfectly matched, trouble ensues. Those where the combs come but a trifle too close, are bridged together, and cannot be separated without causing leakage. If but a trifle too far apart, and the adjoining combs are capped, new work is commenced on top of the capping, making unsightly sections.

With me the use of separators avoids more of the annoyances and petty vexations of our calling than any other improvement in bee-keeping. I would willingly, if necessary, lose 5 per cent. of each honey crop rather than dispense with them.

Bangor, Mich.

For the American Bee Journal.

Single-Walled vs. Chaff Hives.

G. M. ALVES.

Mr. Heddon makes some remarks in a recent number, that set forth a correct theory. Bee-keepers frequently make the mistake of assuming the habitations of bees as analogous to their own, viz: that walls for bees, as well as those for man, should be at all times as non-conducting as possible. Now a little reflection will show that the same conditions do not obtain in both cases. A man's bodily heat has no appreciable effect on the temperature of his room, whereas with bees, the heat of their hive is generated by their bodies.

In our dwellings the walls should be good non-conductors at at all times, for the reason that "what will keep out the cold, will also keep out the heat." The walls of hives should be good non-conductors in cold weather certainly, but in very warm weather a hive, provided it is shaded, with conducting walls, would be more comfortable to the bees, for the reason that the accumulated and excessive heat generated within, could pass off more readily into the atmosphere.

In this respect, bee hives are not analogous to our dwellings, but to our clothing; *i. e.*, to be comfortable should be fair conductors in summer, and non-conductors in winter.

The soundness of this theory is self-evident, and should teach us to make our hives of rather thin walls, which should be well-shaded in the heat of the summer, and if suffered to remain out-of-doors all the year, should be protected by an outer covering in winter. This plan would seem also to be agreeable to cheapness of construction, and facility of handling in the working season.

It would hence seem that the use of chaff hives should be avoided.

Henderson, Ky.

For the American Bee Journal.

Tiffin, O., Convention.

In response to the call a number of the bee-keepers met March 15, and organized by calling Mr. Wm. C. Hamilton to the chair, and Mr. J. T. Martin to act as Secretary.

The first question discussed was: "Shall we have a county bee-keepers' association?"

Several spoke of the necessity and benefits that would be derived from an association, holding meetings every three months, or oftener if thought best, when the motion was carried unanimously.

On motion, the chairman appointed Messrs. J. T. Martin, Marcus Holtz, and Michael Bower a committee to draft a constitution and by-laws and report the same in the afternoon.

The merits of different forms of hives, sections and frames were discussed, when the meeting adjourned till 1 p. m.

At 1 o'clock the chairman called the meeting to order, and called for the report of the committee on constitution and by-laws.

J. T. Martin read the report, which was received and the committee discharged. The report was taken up, discussed, portions re-read, and with a few slight changes was adopted.

Eighteen then signed the constitution, representing 260 colonies of bees.

The election of officers followed, resulting in the election of E. J. C. Troxel as President; J. L. Fisher, Vice-President; J. T. Martin, Secretary; Wm. C. Hamilton, Treasurer, and M. Holtz, J. L. Fisher, and J. T. Martin as executive committee.

The topic, "Early spring treatment," was discussed, different views being advanced as to how bees should be managed in the spring.

Quite an interesting discussion followed on the qualities of the different breeds of bees.

Mr. Feasel gave his experience with Italians, Cyprians, Albinos and Holy Land bees.

In connection with the different varieties of bees, the merits of honey producing plants were discussed with much interest.

Marcus Holtz exhibited a couple of his make of hives, having established a factory near the city.

Mr. Hamilton placed on the table a glass jar of beautiful extracted honey.

Mr. H. H. Overmyer sent in a dozen jars of very nice extracted honey; being unable to be present himself, on account of a death in his family.

The meeting adjourned till the third Saturday of April, at which time a much larger attendance and a more interesting meeting is anticipated. J. T. MARTIN, *Sec.*

For the American Bee Journal.

Are Bees Taxable in Michigan?

E. B. SOUTHWICK.

I notice Prof. Cook's answer to Mr. Cowan's question. I like to pick at Prof. Cook, when I get a chance, for two reasons: One is, the chances are so rare that they are very valuable on account of their scarcity; the other is that he is always so pleasant about it. He says: "All unexempted property is liable to taxation." Right. He also says: "Bees are property." Not in the sight of the law. When the law recognizes property, it protects the man in the holding of that property. Not so with bees. The only claim he has is the ability to induce them to make his place their home; if the bees fly away from his hive and fly over to his neighbor's, and his neighbor puts them in a hive, they are his bees until they change again as before, without the knowledge of the owner. They may change owners. The law recognizes many ways that property changes hands, but in no way without the order of law or the owner's consent; and as the bees change hands frequently in this way, and the law protects the parties in it, it is plain that the law does not consider them property.

Bees, wild turkey, deer, and all that go-where-you-please kind of animals or insects, cannot be considered property in law until dead. For instance, a man has a tame deer; he gets out of his enclosure, runs into his neighbor's woods, the neighbor kills him, then he becomes property in law, that is, the property of the one who shot it. This is the reason bees are not taxed; there are always some who understands the old law that has ruled for hundreds of years. Bees certainly are not taxable; the only way to get a revenue from them, is the way they do with dogs, make a law charging license to keep bees. All the property about the apiary is taxable, but not the bees. I do not believe there is an administrator in Michigan, unless ignorant or officious, who will attempt to assess bees.

Mendon, Mich., March 13, 1884.

For the American Bee Journal.

Southeastern Michigan Convention.

The Bee-Keepers' Association of Southeastern Michigan met at Adrian, on Wednesday, Jan. 23, 1884.

It being a cold and stormy day, the bee-keepers were a little late. The meeting was called to order by Pres Cutting at 11 a. m.; the secretary not being present, his report was deferred till the afternoon.

The meeting was opened by reading a paper by Mr. Howes, on reversible frames, with a description of a device of his invention, by which the frames can be suspended in the hive in a hanging position, the same as an ordinary frame; at the same time allowing the bee-keeper to reverse the frame at will. The device serving the double purpose of reversing the frame and a metal corner.

After some discussion, the convention adjourned.

In the afternoon, the meeting was called to order by the President, at 1.30 p. m. The Secretary's report was read and adopted.

The Treasurer, Mr. G. J. Pease, of Ann Arbor, not being able to attend, the Secretary read his report, which was also accepted.

Dr. A. B. Mason, of Wagon Works, O., then read a paper on Foul Brood, which was discussed by Messrs. Howes, Edmiston, Gibson, and others.

A paper on "Bee-keeping; past, present and prospective," was then read by Mr. D. G. Edmiston.

A committee was appointed to confer with the executive committee of the County Agricultural Society, in regard to better accommodations for exhibits at the fair; also to have the apiarian department of the premium list revised.

The election of officers was then held with the following result:

President, Mr. Frank W. Gilbert, of Adrian.

VICE-PRESIDENTS.

Dr. C. F. Ashley, Ysilanti, Washtenaw Co.
Joseph Butler, Jackson, Jackson Co.
Frank L. Wright, Plainfield, Livingston Co.
G. H. Denman, Pittsford, Hillsdale Co.
Robert Forsyth, Blissfield, Lenawee Co.
M. H. Hunt, Bell Branch, Wayne Co.
Mr. Scranton, Dundee, Monroe Co.

A. M. Gander, of Adrian, Secretary.
D. G. Edmiston, of Adrian, Treasurer.

It was voted that the next annual meeting be held on the first Wednesday of December, instead of January; also that the next annual meeting be held at Adrian.

Several interesting questions were then discussed; among them were: "How shall we winter our bees?" Dr. Mason prefers a good cellar, some damp, but the bees should have no pollen. The others were: "Shall we allow swarming, or divide?" "Which hive shall we use?" The Langstroth frame was preferred by the majority; a few preferred a deeper frame. Drone foundation for sections was quite generally disliked. Adjourned

At 7 p. m., the meeting was called to order by Mr. Cutting; the President, Mr. Gilbert, being obliged to go home at the close of the afternoon session, had requested Mr. Cutting to fill his place, when we were favored by a piece of music by the College Glee Club.

In reply to the question, "What are the best plants for honey," Dr. Mason said he preferred sweet clover; would sow it on waste places, not by the roadside, neither did he think it would pay to put it on land worth $100 per acre for agricultural purposes. When both honey and forage were desired, alsike clover was recommended.

The committee on exhibits reported on the articles on exhibition.

After a piece of music by the Club, action was taken in regard to removing the danger of foul brood in the vicinity of Adrian, the President appointed Messrs. F. W. Gilbert, D. G. Edmiston, C. J. F. Howes, E. S. Townsend and A. M. Gander, as a committee to see the authorities in regard to eradicating the evil.

The following resolution was then adopted:

Resolved, By the Southeastern Michigan Bee-Keepers' Association, in Convention assembled at Adrian, Jan. 23, 1884, that this Association considers foul brood to be a very dangerous and extremely contagious disease, and that we advise all to be careful in experimenting in regard to its cure. If but two or three colonies are afflicted in any apiary, we earnestly advise total destruction of hives and contents, for we consider the risk of trying to cure two or three, greater than their value.

Individual reports are summarized as follows:

Colonies in the spring of 1883	534
" " fall "	652
Pounds of Extracted Honey	4245
" Comb "	9847
Average yield per colony, spring count, pounds	26¼
Pounds of Beeswax	228
Queens sold	128

A vote of thanks was extended to the Glee Club for their fine music; also, to the committee of arrangements for making the meeting successful and interesting. After another song by the Glee Club, the meeting adjourned.

Please excuse the delay in sending this report, caused by circumstances beyond my control.

A. M. GANDER, *Sec.*

For the American Bee Journal.

Bee Diarrhœa—Its Cause.

H. C. WHITLOW.

As I am somewhat interested, with many others, in trying to find out the cause of bee diarrhœa, I will give some facts. I have 28 colonies on the summer stands, well packed in dry sawdust, all but two, which were kept without packing. Sometime ago they had a flight, and the two that were not protected showed signs of diarrhœa. The snow and covers of the hives were spotted with brownish discharges. A friend of mine (Dr. Miller) noticing the same, concluded to help me find out something in regard to the cause.

The Doctor has worked with the microscope for several years, and the facts that I shall give were developed with that instrument. In the first place, bees that had been dead 24 or 48 hours were taken, and the yellow brown matter (the same that is discharged by the live bees before death) was mixed with matter to clearify it, and when submitted to examination under the microscope, a mass of pollen grains could be plainly seen. Most of the pollen grains are so perfect that the class of plants from which they came can be identified. The contents of the bodies of many dead bees were examined carefully, and in every instance this yellowish-brown mass was pollen, and sometimes mingled with honey.

The fact that all the bees were full of this pollen, and that being in a state of partial decomposition and undigested, strongly points to the conclusion that pollen is the primary cause of the disease. It is also very singular that bees should eat a substance that will prove so destructive, especially when they are well-supplied with honey.

North Manchester, Ind.

For the American Bee Journal.

Planting for Bee-Pasturage, etc.

LEONIDAS CARSON.

From the first of February to the evening of the 27th, we had fine, open spring weather, and bees that were on their summer stands could fly almost every day. On the evening of Feb. 27, we were struck by the cold wave that came down from the west, and ever since we have had cold winter again, the ground being frozen and covered with snow.

Bees, as far as I can learn, appear to be in fine condition. I left 14 colonies of my bees on their summer stands, and lost two through the month of January; the others are in fine condition. I set 67 colonies in my winter depository. They appear to be in good condition up to this date, March 4th.

On page 139 L. K. Dickey, of High Point, Ga., enquires why enterprising bee-keepers of the North, who are seeking a better field for their business, do not go to Northwest Georgia and help develop the honey resources? The answer is plain. Enterprising men of all occupations at the North, are loth to settle in the Southern States so long as lawlessness is excused and goes unpunished. I have reference to the trouble at Danville, Miss., last fall. I have long had my eye Southward. I have traveled over many of your pleasant hills and vallies. You are blest with the finest climate in the world. Many of your States would be the paradise of the bee-keeper.

I am pleased to see that bee keepers are becoming awake on the subject of foul brood. I do not know of any in this county, but if bee-keepers continue to procure queens from abroad, how long will it be until we have it here too? Why do not the State Associations see that there are similar laws enacted in every state in the Union, to the one they have in Mich.? It is to the interest of every bee-keeper in the land.

I am very much interested in pasturage for bees, and I would like to impress on bee-keepers the necessity of a continual honey flow all summer. If we are not so situated, we should not suffer another spring to pass without considerable effort on our part. After fruit bloom, comes the wild cherry with its abundance of bloom, and if the weather is favorable, our pets gather considerable fine honey; but if the weather is cold and wet, bees can do nothing until white clover. I would admonish bee-keepers to set out cuttings of the golden willow and plant the black or common locust, plant basswood or linden. Do not forget to set out a nice patch of raspberries; for black caps, plant the Tyler & Sonhegan for early, and Gregg for late; of the reds, plant Hansell, or crimson beauty, for early; and Cuthbert, for late, and you will not only secure a fine lot of raspberry honey, but plenty of fine berries. I have yet to see the man, woman or child that do not love raspberries. After raspberries, plant the blackberry; the hardiest blackberry is the Snyder; Taylor's prolific is fine, and is some larger than the Snyder.

It is claimed that the box-elder and catalpa are profuse bloomers, and yield considerable honey. The clovers all yield honey, and are all good forage plants, unless it is melilot, and I have seen cattle eat melilot clover, when it was young, with great relish.

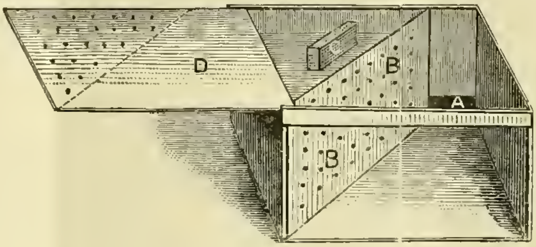
Diamond, O., March 4, 1884.

For the American Bee Journal.

Swarm Controller.

JOHN LONGMATE.

In accordance with my promise I now give a description of my swarm controller and queen and drone trap. By reference to the engraving, the reader will see that it is a box about 12 inches long, 6 wide, and 6 high, having the front side open to within 1½ inches of the top. From the left-hand front corner to within 2 inches of the opposite corner, is a plate of zinc perforated from the inside.



Swarm Controller and Drone and Queen Trap.

A, Entrance. B, Perforated Zinc for egress of Workers. C, Tube of Wire Cloth for Queen and Drones to pass into upper room. D, Zinc cover slid back to show inside of Trap.

The back side of the box is open along the bottom up to the second floor, to let the bees pass freely from the hive into the box. When the bees pass into it, they are directed by the angling side to the right, and the workers pass out through the holes near the corner and make their escape. The queen and drones cannot pass these holes, and are attracted by the light from above and pass up through a tube into the upper room, and are there confined. The workers that find their way into the upper room, pass out through the perforated side. When the workers return from the fields, they naturally alight at the point of egress, and in their laden and distended condition cannot pass readily through the holes, having the rough edges outward, and are directed by the angling front to the right and to the lower corner through a tube of ample size for the heavy-laden workers to pass readily into the hive. This tube reaches about 3 inches into the hive, where it is comparatively dark, and as the queen and drones are attracted by the light at the large passage way, they pass out that way, and do not find the end of the tube; and if they should, the force of the incoming workers would turn them away from it, and they are compelled to pass into the box.

This attachment can be made very useful in many ways, some of which I will mention: When we wish to reduce the number of drones in a hive, we place the trap at the entrance, and in the latter part of the day, when the drones have attempted to fly out, we find them in the trap, and can destroy them. Or, if we wish to use them for any purpose, we can easily catch them in this manner.

When a swarm issues, the workers pass out, then quietly step to the hive and be ready for their return, for it will be only a few minutes before they will be rushing back. Look into the queen cage, to be sure that the queen is there. Now move the old hive to a new stand, and place a new one on the old stand, and when the swarm returns, draw back the sliding floor between the upper and lower rooms, and cover the cage to darken it, and let the queen pass back into the hive, and the large swarm, perhaps with a valuable queen that we were so fearful might go to the woods, are nicely located in their new home. Let the controller remain at the hive for a few days, or until there is no danger of the swarm re-issuing.

When we have after-swarms, and the controller is used, we can ascertain if there is more than one queen, return the one of our choice and utilize or destroy the others, and our swarm is returned to the old hive with no further trouble. If the division floor is left out, and the swarm issues in our absence, it and the queen are returned to the old hive without any attention.

It is not intended to prevent swarming, but to control it. I agree with Mr. Chas. Dadant in his article on page 57, that swarming can be prevented, or nearly so by proper management, but when we do not prevent it by this previous management, either by design or failure, then we should control the swarms, and I am of the opinion that it is best to hive the first swarms in new hives, and if that had been done, and they had not been returned, the "ill-treatment" of the queens would not have occurred.

Mating queens in confinement, I believe, has thus far been a failure, and we must look in some other direction for a means of controlling that matter. When we wish to improve the blood of our flocks and herds, we confine the males that we do not wish to mate, and let those of our choice run with the females. With this attachment to our hives, we can confine the impure drones and let those that are pure fly with the queens. This controller can be made of tin at any tin shop at a small cost. I make them partly of wood. I form a box of thin boards 12x6x6 inches, letting the sides project above the ends with grooves in which to slide this cover. The front is 1½ inches wide; the back 4 inches, with a groove 3 inches from the top. Two inches from the right hand corner, on the inside, tack a perpendicular strip. From this strip to the left hand front corner, slide in a piece of zinc perforated from the inside, with holes 9-64 of an inch in diameter. The left end should be in two pieces, and put together with an opening corresponding with the groove in the back. Through this opening, slide in a triangular piece of tin or wood with a notch in the side next to the perforated zinc 3x⅜ inches, for the queen to pass into the upper room. Over this opening, and attached to the zinc, form a wire cloth tube reaching to within ¾ of an inch of the top, having the opening about ¼ of an inch wide. Slide in on the top a piece of glass or perforated zinc for a cover.

At the right hand corner form a tin tube reaching into the entrance of the hive about 3 inches, with the inside opening 2x¼ inches.

Farmer City, Ill.

For the American Bee Journal.

How to Settle the Pollen Theory.

H. O. MORRIS.

I have several times read that by closing up a hive of bees so that they could not escape, at the same time giving them ventilation and sunlight, the bees would have the dysentery in three or four days, even in summer. I think I have read of some other ways of giving them this disease in a short time. If anybody knows of other means that will surely bring it about, I wish they would report.

My proposition is this: Take 4 colonies of bees in normal condition. No. 1 to have plenty of honey and pollen, No. 2 to have honey and no pollen, No. 3 to have sugar syrup and pollen, and No. 4 to have syrup and no pollen. Treat these all alike, with the conditions necessary to produce dysentery. If the colonies that are provided with pollen have the dysentery and the others do not, we will have evidence that is conclusive, much more so than the winter test; for in some seasons and in some places bees are not affected with it at all. I will make this test next summer and report, and hope others will do the same.

Tiskilwa, Ill.

For the American Bee Journal.

Marshall County, Iowa, Convention.

The Marshall County, Iowa, Bee-Keepers' Association, met at the Court House, in Marshalltown, Feb. 2. Five new members were admitted.

The subject for discussion, "Promotion of Bee-Keeping," was taken up, and well discussed by several members, and, we believe, benefitted all present.

On the subject of "Fair Exhibitions," all desired to have a chance to make a better display of bees and honey products, and the Secretary was appointed to confer with the officers of the Marshall County Agricultural Society, and see what arrangements could be made for the fair of 1884.

It was decided that the election of officers for the coming year, should take place at the next regular meeting, April 5. Subjects for discussion at the next meeting: "Spring and Summer Care," and "Profits of Bee-Keeping."

The Society then adjourned to meet Saturday, April 5, at 10.30 a. m., at the Court House in Marshalltown, Iowa. Bee-keepers of adjoining counties interested in bee-keeping, are invited. J. W. SANDERS, *Sec.*

Convention Notices.

☞ The Wabash County bee-keepers intend to organize a county association on Friday, April 11, 1884, at 10 a. m., at the Court House in Wabash, Ind. All bee-keepers of this and adjoining counties are requested to meet with us. H. CRIPE.

☞ There will be a meeting of the Kansas Central Bee-Keepers' Association at the Grange Hall in Manhattan on April 5, 1884. The following papers have been secured: "Forage plants for bees," by Thomas Bassler, K. S. A. C.; "Pleasures and dangers of bee-keeping," by Robert Corbet, of Manhattan; "Ancient and Modern bee-keeping contrasted," by S. B. Kokanour, of Manhattan, and a paper by Aug. L. Entsminger, of Silver Lake, Kans. There will be election of officers, etc.

THOMAS BASSLER, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa, will meet at the Emmett house, in Dexter, on Saturday, March 29, at 10 a. m. sharp. All who are interested in apiculture are invited to attend.

M. E. DARBY, *Sec.*
W. B. KENYON, *Pres.*

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*

☞ The Western Michigan bee-keepers, will hold their spring meeting at Berlin, on April 24.

F. S. COVEY, *Sec.*

☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyhoga County, O. All interested are invited. J. R. REED, *Sec.*

☞ The next meeting of the Bee-Keepers' Association of Central Illinois, will be held in the office of the County surveyor, in Bloomington, on Wednesday April 9.

W. B. LAWRENCE, *Sec.*

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

☞ The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest, for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twichell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."

C. M. CRANDALL, *Sec.*
Independence, Mo.
H. SCOVELL, *Pres.* Columbus, Kans.

☞ We will organize a bee-keepers' association at the Court House in Franklin, Ind., at 10 a. m., April 5, 1884. All bee-keepers are invited to attend and take part in the organization. L. R. JACKSON.
Urmeyville, Ind., Feb. 26, 1884.

☞ The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.

O. J. TERRELL, *Sec.*
North Ridgeville, O.

☞ The Mahoning Valley bee-keepers will hold their next meeting in the Town Hall at Newton Falls, O., on Thursday, April 10, 1884, at 10 a. m.

E. W. TURNER, *Sec.*
L. CARSON, *Pres.*

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Local Convention Directory.

1884. *Time and place of Meeting.*

Mar. 29.—Union Association, at Dexter, Iowa. M. E. Darby, Sec., Dexter, Iowa.
April 5.—Marshall Co. Iowa, at Marshalltown. J. W. Sanders, Sec.
April 5.—Kansas Central, at Manhattan. Thomas Bassler, Sec.
April 9.—Ass'n of Central Ills., at Bloomington. W. B. Lawrence, Sec.
April 9.—Lorain Co., at Elyria, O. O. J. Terrell Sec., North Ridgeville, O.
April 10.—Mahoning Valley, at Newton Falls, O. E. W. Turner, Sec.
April 12—Texas Central, at Waco. I. W. Grayton, Sec.
April 18,—Iowa Central, at Winterset, Iowa. J. E. Pryor, Sec.
April 22.—Des Moines Co., at Middleton, Iowa. John Nau, Sec.
April 24.—Western Michigan, at Berlin. F. S. Covey, Sec.
April 24, 25.—Western, at Independence, Mo. C. M. Crandall, Sec.
April 24, 25.—Texas State, at McKinney. W. R. Howard, Sec.
May 3.—Progressive, at Bedford, O. J. R. Reed, Sec.
May 6.—Southern Wisconsin, at Janesville. J. T. Pomeroy, Sec.
May 26.—Will County, at Monee, Ill. P. P. Nelson, Sec.
Oct. 11, 12.—Northern Mich., at Alma, Mich. F. A. Palmer, Sec., McBride, Mich.
Oct. 15, 16.—Northwestern, at Chicago, Ill. W. Z. Hutchinson, Sec.
Dec. 10, 11.—Michigan State, at Lansing. H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM
OUR LETTER BOX

Bees in Excellent Condition.

I commenced the spring of 1883 with 20 colonies of Italian and hybrid bees, and took from them, during the season, over a ton of honey. I use the Langstroth hive exclusively. I use comb foundation in the sections, and find it pays. I would have it, if it cost $1.50 per pound. I prefer that which runs about 10 feet to the pound. I can see no difference in the flat or natural bottom; my bees take as well to the one as to the other. I have now 30 colonies, and hope to get at least 3,000 lbs. of honey. C. E. Canoles.
Hereford, Md., March 14, 1884.

Bees Wintering Fairly.

Our bees seem to be in more than average good condition for this date. We are anxiously looking forward to the final result of our carefully prepared experiments with the wintering problem. I have already seen enough in past years to convince me that Bro. Pond is clear off the track on the cause of spring dwindling. I will give my views on that subject, and reply to Dr. Tinker's last article, when giving in my wintering report for 1884. The Doctor seems as far astray as Bro. Pond. The Doctor's effort to answer that report before it comes to light, is "taking time by the front forelock." Our test will be clear of any such errors as the Doctor mentions. Bees do not keep warmer with sugar than with honey; they just eat considerable less of it, that is all. The thermometers shows no difference. We will try to make it all clear to the Doctor. Our report may be a frank admission of a big mistake; we shall see, and report facts just as they appear, and "let the chips fall where they may." James Heddon.
Dowagiac, Mich., March 19, 1884.

Why Eat Honey?

Dear Editor:—I have received the sample of Leaflet No. 1, entitled, "Why Eat Honey?" I think that bee-keepers owe you a vote of thanks and liberal patronage for your endeavors to create a market for honey. The get-up of the Leaflet is good, and I think they will do a great deal toward correcting the ideas of consumers of honey. In general they have no idea of the perfection of methods of bee-culture, and if they have any knowledge of the business whatever, it is of management with the old-fashion way with box hives. In view of this, it is not strange that when people are told that we can take honey from the comb and return them to the hive to be filled again, that they should ask with evident distrust, how we are going to put our combs back in the hive and have them filled again? Would it not be well to explain in the Leaflets, that with the methods in modern bee-culture we compel the bees to build their combs straight in sectional frames, and that these sections can be removed from the hive in an instant, the bees brushed off, the honey extracted, and the combs returned to the hive to be again filled, etc. W. N. Howard.
Derby, Vt., March 19, 1884.

[Yes; we will elaborate a little on that idea—though we mentioned it briefly in the Leaflet.—Ed.]

My Feeder.

I wish to describe the feeder I use, and think among the best. It is a common brood frame, from the top 3½ inches down, is placed a second triangular comb guide, then on each side is fastened pitcure-back material, reaching within ⅜ of an inch of the top triangular guide. This is fastened in paint, and beeswax is run along each side of the lower comb guide. This makes a feeder 3 inches deep and ⅞ inches wide, and as long as the frame. Near one end, through the top-bar, is made a half-inch hole; this hole is placed at the back of the hive (put comb foundation in below the lower guide, or see that the bees build worker comb there), cover with a quilt of single thickness first, cut through this quilt into ½ inch hole a straight slit ½ inch long; have a small funnel made that will go through this hole into the feeder. I use an old teapot to pour the feed into the funnel; and it will surprise one at the short time it will take to feed 50 or 100 colonies, and that, too, without seeing a bee. The holes will close up after the funnel is removed, keeping every bee below. Keep this frame in the middle of the hive, especially in the fall, winter and spring. In the summer it can be moved next to one side of the hive. This feeder is practicable, if made right; if more than ⅜ inch space at the top is left, comb will be built into it, but it must be left in the hive, as it cannot be easily removed on account of the bees that are always in it; but, if it must be removed, shake the bees to one end; then with a quick downward motion, the bees will slide out, each side of the upper comb guide (which is better than a flat surface for them to strike against). A lot of lose feeders lying around are a nuisance; these are always in the hives, out of the way, and just where you want them for use.
Medford, Minn. J. E. Cady.

Cyprians, Syrians and Italians.

I put into winter quarters 53 colonies of Italians, Cyprians, Syrians, Albinos and a few hybrids. I have nearly all in double-walled chaff hives, and a few are in single-walled hives. I give these some protection by packing leaves around the outside. I have one in the American double-walled hive. It is a two-story hive in summer, and a double-walled hive in winter. It has nine frames 12x12. It is a good hive. The rest of my bees are all on Simplicty frames, 9⅛x17⅝, outside measure. For six years I have wintered all my bees out-of-doors. This winter I have yet lost none. I find that Italians crossed by Cyprians or Syrians are good honey gatherers. Syrians and Cyprians excel the Italians for gathering honey, but they are very cross. I prefer bees or queens that are kept where the different races are kept in one apiary. I think they are worth nearly one-third more. Otto Kleinow.
Detroit, Mich., March 20, 1884.

Preparing Bees for Winter.

As we have just wintered about 40 colonies of bees on the summer stands, and without the loss of a single one, we will explain the manner in which we prepared them. In the first place, we pay little attention as to whether the combs contain pollen or not, but see that each hive has 20 pounds of honey, at the least, and if more, all the better. We use the 10-frame Langstroth hive, and remove a frame from each side, leaving eight; in the place of the frames removed, division-boards are inserted, and over the frames sticks are placed, in order to allow the bees to pass to all parts of the hive; for the same purpose a hole is cut through the centre of each comb remaining in the hive. We now place a coffee sack over the frames, and fill the remaining space in the upper story with corn shucks, which absorb the moisture, and give freer ventilation. keep the hives and combs dryer than anything we have yet tried. So long as our bees are dry, warm, and have plenty of good honey (or a syrup made from the best quality of sugar will, perhaps, answer as well), we can defy the severest winter. Our prospects here for a crop of honey is good, but it mainly depends upon the management between now and the harvest. A. E. Foster.
Covington, Ky., March 20, 1884.

Educate the Customers.

Leaflet No. 1 is received, and I pronounce it very good. I think it will be a great help to many, situated as I am, among people totally ignorant of the improved methods in bee-culture, which includes about nine-tenths of the country people. Why, I have those who keep bees in the "go-as-you-please" way, come for me to go and extract from box hives and log gums, and when told that it is necessary to have movable frame hives in order to extract the honey, they look amazed, and when shown comb foundation, they look as if they would have the lock-jaw. S. SMITH.

Neoga, Ill., March 20, 1884.

Four Per Cent. of Loss in Winter.

Last fall I packed 100 colonies of bees on the summer stands, with planer shavings and chaff. They flew quite freely to-day, for the first time since winter set in. They were confined to the hives 98 days, and some of them were badly affected with diarrhœa. The loss thus far is 4 per cent. Colonies on new combs are wintering much the best, which I noticed was also the case last winter. The bees in my cellar are quiet. W. D. WRIGHT.

Knowersville, N. Y., March 13, 1884.

Iced Entrances.

It is too early to report yet, but some in this section are losing bees pretty lively. Diarrhœa appears to be the trouble; also smothering, from ice accumulating in the hives. Mine are still in the cellar, and most of them appear to be doing finely, but more about them later, after I see just how they come out. M. BAILEY.

Winterset, Iowa, March 12, 1884.

Successful Beginners.

To-day our bees are flying; and some are gathering sap from the sugar maple. We commenced, last spring, with 6 colonies in box hives. We had never used frame hives, and, therefore, nearly everything was new to us. Having the BEE JOURNAL and Cook's Manual we made fast progress, and after a bee-keeper had shown us how to transfer a colony, we transferred the rest without any trouble, and also several for neighbors. We increased to 15, and got over 200 lbs. of honey, most of it in one-pound sections; the rest extracted. Nearly all of our honey was from linden. We got none from white clover. Our comb honey sold for 22 cents per pound, and the extracted for 15 cents. Our colonies brought us about $20 each, spring count, which, I think, is excellent for the first year. We planted a piece of mignonette about 30 feet square; the bees worked on it early and late, till frost. We intend planting more extensively the coming year. I have seen remedies for bee stings in the BEE JOURNAL, and have used many different ones, but the best was common salt and water immediately applied to the wound. We have Italianized about half of our colonies, and expect to Italianize the rest in the spring. We intend to work for extracted honey in the future, and build up a home market for it. We use a frame 9⅛x13½ inches, outside measurement, and prefer it to all others for our use; it will work crosswise in a Simplicity body; we call it the Crosswise Langstroth frame. Quite a number of bee-keepers in this part of the State use it, and like it better than others.
H. D. GATES & SON.

Gerry, N. Y., March 18, 1884.

Hard on Bees.

My 57 colonies of bees wintered on the summer stands very well until the last blizzard, which caused the brood to be almost entirely destroyed, which will be a very heavy loss to all who have bees in this section of Northern Kentucky. Success to the BEE JOURNAL. May it outlive all the adulterators of sweets, so that pure honey will be one of the staples of this country. WM. G. GOSNEY.

De Mossville, Ky., March 14, 1884.

Feeding in Winter.

I have read quite a little about feeding bees in cold weather, so last fall I thought I would try and feed 2 colonies all winter. Late in October, I put all my bees in winter quarters; these 2 with the rest. The latter had less than 3 lbs. of honey each. I put on a Nellis feeder; it will hold about 2 quarts; I filled it once in October, and have fed them every month since, and they are, to-day, in as fine condition as you could wish to see. The food was granulated sugar, about as thick as thin honey. They have to leave the cluster and come up about 4 inches to get the food. I only feed them when it is warm enough for them to fly; then pour it in quite hot. The feeder is very easily made, and I like it better than any I have had yet. I have kept bees 7 years; have always wintered on the summer stands; never lost any until this winter, when I lost one with dysentery. The rest are all right so far. I thought, perhaps, this might be a help to some that would like to feed.
D. S. BASSETT.

Farnumsville, Mass., March 18, 1884.

White Clover Not Winter-Killed.

The weather has been very fine here for the past two days, and the bees are making good use of it, seeming glad to get out once more, after their long confinement. Much to my surprise they were carrying in pollen quite freely this afternoon, but what they gather it from is a puzzle to me, for there are no trees in bud or bloom yet. I have a row of very large maples on the east side of my place, and the severe freezing weather of the past winter has cracked them open pretty badly; the sap is now oozing out freely, and running down the bodies of the trees. These places are literally covered with bees sipping the sap; the little fellows do not wait for something better to turn up—as human beings sometimes do, but pitch into the first thing that has any sweetness about it, and work at it with a will while it lasts, and then when the better does come, they can enjoy that all the more. The past winter has been a very severe one, on bees that were left on the summer stands, but owing to the good quality and quantity of well capped honey, and being strong in numbers, and mostly all young bees bred late in the fall, they have come through in good condition, with but very few losses, in this section, although the thermometer stood away below zero most of the time, and on Jan. 5, it was 32° below. The white clover has not been winter-killed, and looks very promising up to date. E. ARMSTRONG.

Jerseyville, Ill., March 13, 1884.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 17, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirious of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, at 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Demand for comb honey good, and stocks reduced quite low. The recent concessions in prices have brought orders in quite freely. Choice white 1 and 2 lb. sections, 16@17c. Extracted in better demand, at 8@10c.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Stocks are mostly of fair to medium quality. There is very little inquiry. Prices are nominally unchanged, but the undertone of the market is weak. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c: dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@16c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is improving a little; are selling first-class 1 lb. sections quite readily at 18c, with an occasional sale at 19c; 2 lb. is not quite so active, at 17c. Second quality is dull at 15c. Extracted not wanted.

BEESWAX—35c, but very scarce.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

* * *

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

* * *

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 25
" 200 colonies (420 pages)...... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

* * *

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

* * *

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50. 500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

* * *

☞ We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will probably be 50 cents.

* * *

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

* * *

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

* * *

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

HONEY EXTRACTORS!

20 per cent. discount on all orders received for the next 30 days on Honey Extractors of the most improved designs. Bokhara Clover Seed, 20 cts. per pound. Extracted Honey Wanted.

EDMUND J. BERRY,
13A1t BROME CORNERS, QUE, CANADA.

WANTED—A young man of some experience in Bee-Keeping to work in the apiary. Reference required. Address, stating age, experience, and wages wanted,
W. D. WRIGHT, Knowersville, Alb. co, N. Y.
13A1t

PLEASE SEND FOR MY PRICE LIST

Of Langstroth Hives, Sections and Supplies in general, before buying your supplies for 1884. HENRY CRIPE, N. Manchester, Ind.
13A2t

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100 COLONIES OF

Bees For Sale

They are in Langstroth hives, one or two story. The Bees are Italian, Arkansas Brown, Cyprian and Hybrids—the best honey-bees in the world. Price $3 per colony, at the apiary. Safe arrival guaranteed.

GEO. B. PETERS,
13A1t PETERS P. O., Lee Co. ARK.

FOR 1884, ITALIAN and CYPRIAN Bees and Queens For Sale in any shape and quantity. Address,
OTTO KLEINOW, DETROIT,
13A1t 4B1t Opposite Fort Wayne, Mich.

Everybody! "Prator's Quilting Attachment" fits any Machine and turns out a Bed Quilt in less than ninety minutes. Agents wanted.
C. R. MITCHELL, Hawkinsville, Ga.
13A1t

HELP WANTED.—1 agent wanted in every place to sell our new goods. Big pay. 40 samples only 10c. Maps free. Cut this out
Acme Novelty Co., Clintonville, Conn.
13A8t

I WANT TO SELL

Being unable to keep my apiary in the city for want of room, I offer the same **For Sale Cheap.** It consists of about 60 colonies of Italian Bees. Hives are mostly one-story chaff, with top for surplus. Langstroth frames 17⅝x9⅛. All Combs built on heavy Foundation; 200 surplus Brood Combs, &c., &c.

JAMES URE, EAST SAGINAW, MICH.
13A1t

SPECIMEN BOOK FREE.
GEO. M. GRAY & CO.
HONEY LABELS
ALL PRINTING First Class.
JOB PRINTING Of all Kinds.
MEDINA,
MEDINA CO., OHIO.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

NEW
Vegetables
A
Specialty.
GREGORY'S
SEED
CATALOGUE
1854.-1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all.
JAMES J. H. GREGORY, SEED GROWER, MARRLEHEAD, MASS.

FOR SALE CHEAP.

BEES! BEES!

Having more Bees than I can well handle, I wish to sell 100 Colonies immediately. I use L hive.
12A2t **E. DRANE,** EMINENCE, Henry Co. KY.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Italian Bees and Queens For Sale.

Tested Queens, May, $3.00; June, $2.50; after July 1, $2.00 each. Untested, after June 1, $1.00; 6 for $5.40. Full colonies in May, $7.00; 2 for $13.00; 10 for $60.00. After June 1, $1.00 less each colony. Satisfaction guaranteed. I. S. CROWFOOT,
12A8t Hartford, Wis., April 1, 1884.

HELP WANTED,

To handle Bees this season. Address, with terms, etc., **E. DRANE,** EMINENCE, Henry Co. KY.
12A2t

ITALIAN QUEENS, DADANT FOUNdation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Italian Bees and Queens For Sale!

Send 25 cents (one cent stamps) and get our Book on BEE-KEEPING.

Address E. P. BAKER,
10A8t Box 342, DES MOINES, IOWA.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,
12A8t 4B4t AUGUSTA, GA.

ALLEY'S

Drone Excluder, Queen & Drone Trap

COMBINED.

Sample, by mail, 65c.; by express, 50c. In the flat, per dozen, including one made for model (13 in all) $3.00. Send for our 23d annual Circular and Price List of Queens and four races of Bees.

Bee-Keepers' Handy Book, bound in cloth, by mail, $1.00.

HENRY ALLEY,
9Atf **WENHAM, Essex Co. MASS.**

BEE-KEEPERS, before ordering your **APIARIAN SUPPLIES,** Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

Bees, Bees! and Eggs, Eggs!

One to 200 Colonies of Italian Bees For Sale.

1 to 10, at $6.50 each; 10 or more, at $6.00 each. Tested Queens after June 1, $2.00 each. Also Eggs for hatching, from choice stock of White and Brown Leghorns, at $1.50 per set of 13 Eggs. Send Card for Price List and reference. Address to **WM LOSSING,** HOKAH, Houston Co. MINN.
10C3t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
32ABtf **J. VANDERVORT, Lacyville, Pa.**

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being showing what to do, and when and, how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 a year.

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65 *ENGRAVINGS*

THE HORSE,

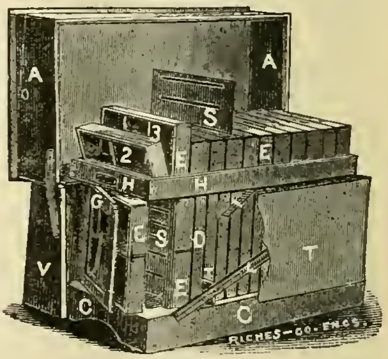
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

1876. CROWN 1882.

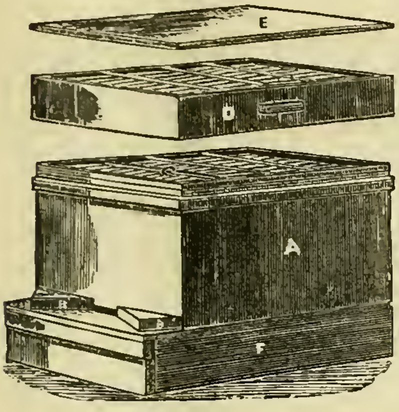


The best arranged HIVE for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, **ELVIN ARMSTRONG,**
Prop'r. of the Crown Bee Hive Factory and Apiary,
JERSEYVILLE, ILL.

1868. 1884.

HEDDON'S
COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC Cass County, MICH.

BEE-KEEPERS'
SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax, the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS!

The present prices are as follows:

White Clover, $15.00 per bushel, $4.00 per peck, or 30 cts. per pound.

Alsike Clover, $12.00 per bushel, $3.25 per peck, or 25 cts. per pound.

Sweet Clover, $10.00 per bushel, $2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE
For Brood Frames.

One ounce spools, each, - 4 cents.
Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents.
Postage, 13 cents extra.

One pound spools, each, 40 cents.
Postage 18 cents extra.

One pound will wire about 175 frames.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,
923 West Madison Street,
CHICAGO, - - ILLINOIS.

American Linden or Basswood
FOR BEES!

5 to 10 inches, per 100..................$1.50.
3 to 5 feet, per 100.................... 7.00.

For sale by **Z. K. JEWETT**, SPARTA, WIS.
12A6t 4B2t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DR. FOOTE'S
HAND BOOK OF HEALTH,
HINTS AND READY RECIPES.

Is the title of a very valuable book that gives a great amount of information of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphthera, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sunstroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL

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30 DAYS' TRIAL
DR. DYE'S

(BEFORE.)

(AFTER.)

ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address

VOLTAIC BELT CO., Marshall, Mich.

6D1y

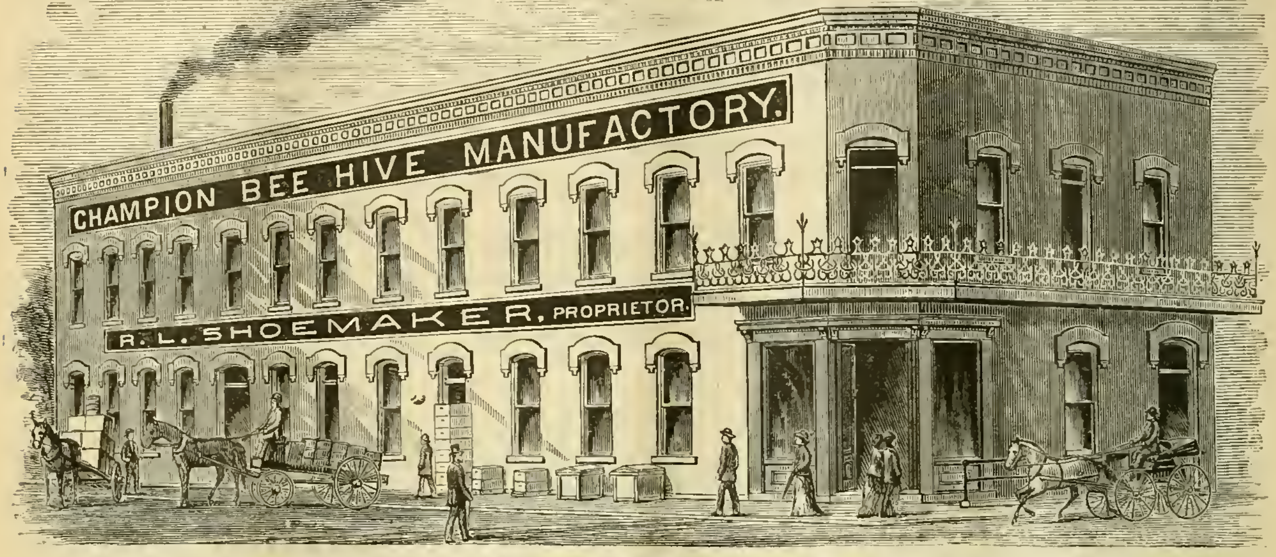
GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.

4A1y

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian implements, send for Circular to

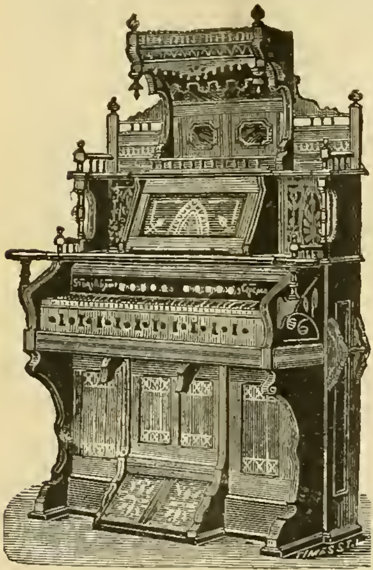
FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.


CHAMPION BEE HIVE MANUFACTORY.
R. L. SHOEMAKER, PROPRIETOR.

All Bee-Keepers wanting **HIVES OR SECTIONS** of any kind, and in any quantity, will confer a favor by sending for my Price List (Price List Free). Direct

CHAMPION BEE HIVE MANUFACTORY,

R. L. SHOEMAKER, Proprietor. **Newcomerstown, Tuscarawas Co. Ohio.**



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
Mathushek,
Simpson & Co.,
Story & Camp.

Estey,
Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street,
CHICAGO.

203 N. Fifth Street,
ST. LOUIS.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t **H. C. WHITE**, MADISON, IND.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine.
4A1y

A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

OLDEST BEE PAPER IN AMERICA
ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

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THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
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Weekly, **$2** a year; Monthly, **$1**.

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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☞ Letters for publication must be written on a separate piece of paper from items of business.

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

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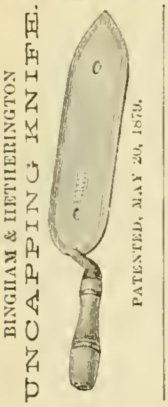
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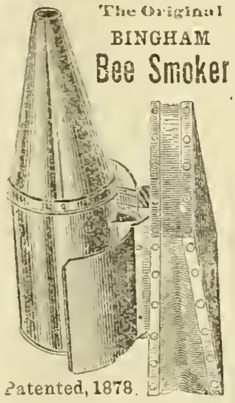

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Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

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Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

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Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

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Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., APRIL 2, 1884. No. 14.

THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,

Counterfeit Comb Honey.

Mr. S. X. Clarke, Delavan, Wis., sends us the following :

> In the *Century Magazine* for October, 1883, on page 816, I find the following paragraph in an article entitled, "Outdoor Industries in Southern California," by which, I think, many of its readers may be mislead :
>
> "A still more tyrannical circumvention has been devised, to get extra rations of honey from bees ; false combs, wonderful imitations of the real ones, are made of wax. Apparently the bees know no difference ; at any rate, they fill the counterfeit full of real honey. These artificial combs, carefully handled, will last 10 or 12 years in continued use."
>
> I think a contradiction or explanation of such paragraphs by bee papers of such standing as the AMERICAN BEE JOURNAL may tend to lessen the ill-effects of such mistakes of reporters, who are mostly ignorant of modern bee-keeping, and, of course, make a botch of what is told them by well-informed bee-keepers. S. X. C.

It is very damaging to have such articles as that quoted by Mr. Clarke appear in the agricultural and literary papers and magazines, but we are almost powerless to prevent it. The reporters "dish up" such things with much "gusto," all for sensational effect, without any regard for truth, just as they do items of scandal and infamy in the daily press ; and, just as long as the readers relish that kind of trash, they will find it everywhere. It is truly deplorable, and, apparently there is no potent remedy at hand to stop such misrepresentation.

In the item referred to by Mr. Clarke the reporter is not referring particularly to the "Wiley story" about "paraffine combs filled with glucose," so often quoted in the papers, and which the distinguished "Professor Wiley" confessed was without foundation, and gotten up by him as "a scientific pleasantry" just for the fun of telling a *lie* so large that it might make him notorious ! That has been exposed so often that it is, we may reasonably hope, about "played out."

What the reporter was endeavoring to describe was evidently the use of comb foundation, and made the blunders alluded to, by his ignorance of the matter.

Bee-keepers, too, are very much at fault in this matter, by presistently calling it artificial comb, when speaking of comb foundation. This is done at Conventions and in general talk quite often. A prominent bee-keeper of Ohio has cut out and sent to us an advertisement of Mr. A. I. Root, also enumerating "artificial comb" as one of the articles he keeps for sale. We hope Mr. Root will see that his advertisements are all corrected, as he promised in *Gleanings* sometime since. This matter is becoming quite important on account of the public misrepresentation in the press about "artificial combs being filled with glucose and sold for comb honey." Let all be careful to "call things by their right names."

California Honey Crop.

We have received the Annual Review of California Crops for 1883, by Geo. W. Meade & Co., San Francisco, Cal. They have put the crop of honey for the past year at 960,000 pounds, and divided thus : Comb honey, 125,000 pounds ; extracted honey, 835,000 pounds. They make the following remarks about the honey crop : "The product of California comb honey, last year, was very light, scarcely more than enough to supply the home demand, and prices generally ruled high. Extracted turned out far better than was anticipated, but owing to the large crop of domestic honey East, the sale here has been dull and slow, and a considerable surplus will have to be carried over into the new year. The European demand for California honey has also been limited, though our honey is preferred there when prices here will permit of business."

Nearly a million pounds for California in a poor season is not a very bad showing, after all.

Removing the Bees from Cellars.

Mrs. L. Harrison gives some good advice about this matter in the *Prairie Farmer*, from which we condense the following :

> Good judgment and care must be exercised in removing bees from the cellar, or disastrous results will follow. We know of an apiary of over 100 colonies that was badly injured, indeed, nearly ruined, by all being taken from the cellar all at once on a fine, warm day. The bees all poured out of the hives for a play spell, like children from school, and having been confined so long together in one apartment, had acquired, in some measure, the same scent, and soon things were badly mixed. Some colonies swarmed, others caught the fever, and piled up together in a huge mass. If a few hives are removed near the close of the day and put in different parts of the apiary, the danger from swarming out is avoided, for the bees will become quiet before morning, and being far apart will not mix up when they have their play spell. The success of bee-keeping depends upon the faithful performance of infinite little items.
>
> The hives should be higher at the back, inclining to the front ; if the height of two bricks are at the back, one will answer for the front. This inclination to the front is an important matter ; it facilitates the carrying out of dead bees and debris from the hive, the escape of moisture, etc.

Catalogues for 1884.—The following new Catalogues and Price Lists are received :

Wm. Lossing, Hokah, Minn.—3 pages—Apiarian Supplies.

P. Spœrke, Fond du Lac, Wis.—4 pages—Comb Foundation Mills, with sample of nice thin foundation.

J. H. Nellis, Canajoharie, N. Y.—8 pages—Apiarian Supplies.

H. K. Beecham, Traverse City, Mich.—4 pages—Bees and Apiarian Supplies.

CORRESPONDENCE

For the American Bee Journal.

Weight of Sections.

C. C. MILLER, 172—249.

Heretofore there has been some surmizing as to what size a section should be, to weigh a given amount. I had five different sizes of sections the past season, and can now give the average weight of each. They were all 4¼x4¼, differing only in thickness. The largest size were the common one-pound sections, used with separators, measuring in thickness 1 15-16, or 2 inches, but as the wide frames in which they were used were 2 inches, it virtually made the sections 2 inches. All the others were used without separators. The weights for the different thicknesses were as follows:

2 inches	weighed	14.3	ounces.
1 5-7 "	"	13.8	"
1½ "	"	11.75	"
1⅓ "	"	10.5	"
1 1-5 "	"	9.6	"

We can, by no means, come to any final conclusion from this, for "bees never do anything invariably," and the same experiment at another time might not, and very likely would not give exactly the same results. I think likely these weights are all unusually light, for heretofore the size first given has always averaged 16 ounces or more, and this time only 14.3 ounces. If we take 16 ounces as the ordinary weight of the section 2 inches wide, and increase the weights in the above table in proportion it will make

1 5-7 inches	weigh	15 44	ounces.
1½ "	"	13.14	"
1⅓ "	"	11.74	"
1 1-5 "	"	10.74	"

Referring back again to the actual weights, some interesting results may be obtained. The sections were of such thickness that when put into a Heddon super (all but the 2 inch ones were raised in Heddon supers) a foot space would be *exactly* filled by 6, 7, 8, 9, and 10 of the different kinds respectively. If we now fill a foot space with the different kinds successively, we will find a foot of

2 inch	sections	weighs	85.8	ounces.
1 5-7 "	"	"	96.6	"
1½ "	"	"	94.	"
1⅓ "	"	"	94.5	"
1 1-5 "	"	"	96.	"

The one and five-sevenths inch sections take 7 to the foot, and the 1½ inch take 8; so there is one more space between the combs in the latter than in the former. The difference in weight of a foot of each is 2.6 ounces, and we may say the extra space takes away 2.6 ounces of honey, and that for every additional space in the foot there will be 2.6 ounces less of honey.

Let us see if this holds good. In the case of the 2-inch sections there are 6 combs to the foot, making 7 spaces (of course the outside spaces are counted) without separators, but as 5 separators are used, we have 5 more spaces, making 12 spaces, or 4 more spaces than in the 1 5-7 inch sections. Deduct 2.6 ounces for each of these 4 spaces, making 10.4 ounces from 96.6 ounces, leaves 86.2 for the weight of six 2-inch sections, which is only 4-10 of an ounce more than the actual fact. Following down the list from the 1 5-7 inch sections each kind has just one more space than the preceding kind, consequently the weight in each case should be 2.6 ounces less than the preceding one. Instead of this we find, as the sections grow smaller and spaces increase, an actual increase or half an ounce, and then another increase of an ounce and a half. This looked so unreasonable to me that I tried to find some mistake, for surely any reasonable set of bees ought to get less honey into a super if more room was taken up with empty spaces.

However, finding no mistake, I give the facts as I found them. Perhaps it is best not to theorize, but it is just possible that the inconsistency of the bees may be explained somewhat after this fashion: It left to their own will they prefer to make their combs about 1½ inches from centre to centre, and if compelled to build farther apart a larger space is left; if forced to build closer together a smaller space is left, by the attempt in each case to approximate their favorite thickness of comb.

Marengo, Ill.

For the American Bee Journal.

Premiums at the London, Ont., Fair.

WM. H. WESTON.

Last year only $43 in prizes was given for bees and honey, but this year the bee-keepers of this county have been very successful in getting premiums; in fact, have succeeded far beyond their expectations. A committee composed of Mr. D. P. Campbell, President; Mr. Frank Atkinson, Vice-President, and Mr. J. B Aikes representing the West Middlesex Bee-Keepers' Association, also your humble servant (by special request) met with a committee of the Western fair board, in their rooms in this city, to make every arrangement, and to form a prize list for the coming exhibition to be held in the month of September next. We succeeded in securing a prize list amounting between $150 and $200.

The gentlemen forming the committee have signified their intention to do all in their power to make the next show of bees and honey the best ever held in Canada. To that end they have set aside a building which will be placed at the disposal of all persons wishing to show. The only charge will be $1 for membership, for which members can enter as many articles as they please; they also have four tickets given them to admit them to the grounds. The committee have also granted the bee-keepers the free use of the Board of Trade rooms in this city for two nights, in which to hold their convention, which they will do during the Fair; the exact date I will give at some future time. The building to be used for the bee and honey show is in the best locality on the grounds, and not placed in some "out of the way" place, as it is at some shows.

All possible arrangements will be made so that exhibitors from the United States will be able to exhibit without having to be at expense for duty. I will forward the full prize list at some future time. They also provide the lumber and a carpenter to arrange tables and shelving to suit exhibitors, free of cost. So you see what enormous advantages we have secured, and which, I think, will bring together the largest gathering of bee-keepers ever held in this city.

London, Ont.

For the American Bee Journal.

Tuscola County, Mich., Convention.

As regards bee-keepers' associations, Michigan is the banner State. Her State organization is the oldest in the country, while her local associations out-number those of any other State. The youngest of the local associations is the Tuscola county, which was organized March 15, at Vassar. The officers are as follows: President, N. Van Patten; Vice-President, A. Haines; Secretary, M. D. York; Treasurer, A. Haines. The afternoon session was called to order at 1:30 p. m., with President Van Patten in the chair.

The first topic discussed was: "Is it desirable to prevent increase in raising comb honey, if so, how?"

President Van Patten: If our apiary is overstocked it may be desirable to prevent increase, but I know of no practical way of preventing it.

W. Z. Hutchinson: If I had too many bees in the spring, so many that my field was overstocked, I would sell bees at some price rather than try to prevent swarming.

The President: I did not exactly mean if the field was overstocked, but if there was not room in the yard for more bees.

W. Z. Hutchinson: If we cannot afford to furnish even "standing room" for the increase of an apiary, bee-keeping must be a poor business indeed. As the President remarked, there is no practical method of preventing swarming when working for comb, and I, for one, would not prevent it if I could. I would not begin the season with more than one-half the number of colonies that my locality would profitably support. I would shade the hives, furnish them with good large entrances, and give plenty of room in the boxes. With this treatment a few of the colonies will cast no swarms, and none of them will swarm until they are populous and will furnish large swarms. When a swarm issues I would put it in a new hive and place it upon the old stand; set the parent hive to one side, the back end of the hive touching the back end of the new hive, but the front turned to one side at an angle of perhaps 45°. The honey boxes remove from the old to the new hive. Each day slightly move the old hive until at the end of 5 or 6 days it would be standing close by and parallel with the new hive. At about the seventh day remove the old hive to a new location, when all the flying bees would return to the old location and enter the new hive; thus "booming" the new colony, where are the section boxes, and so reducing the numbers in the old hive at the time when the the queens are hatching, that all thoughts of swarming would be relinquished. If the honey harvest continued when the young queen began to lay, I would put a case of sections upon the old hive. With this system of management there is no opening of hives, no hunting for and cutting out of queen-cells, no fussing and bother; and, in my experience, only about one colony in 25 has cast an after swarm.

D. York: I practice putting a swarm into a hive from which a swarm has issued a day or more previous; there is then spent that energy that a new swarm always has in storing honey in the boxes.

W. Z. Hutchinson: Some who have tried Mr. York's method say that the bees swarm out again in a few days, but if they do not, there is no increase, and in my opinion increase is desirable. When we start out in the spring with our apiary in such a condition that increase is undesirable, we show a lack of business management or ability. I secure more honey from a colony and its increase, that swarms, than I do from a colony that does not swarm, and I have the increase into the bargain. Again, I say, why prevent increase?

Question: "How to tell from which hive a swarm has issued?"

Mrs. Wright: When we see a swarm clustered, and do not know which hive it came from, how can we ascertain?

President Van Patten: By noticing that the bees are not "hanging out" at some hive, that there are but few bees going out and in, and by looking into the boxes and noting the absence of bees.

D. York: After a swarm has been hived, there are a few bees that will "cluster" again, watch these "stragglers" and see into which hive they go; that is the hive from which the swarm came.

W. Z. Hutchinson: We do not allow our bees to "hang out," neither is there time in a large apiary to go around and examine all the surplus departments, nor to wait to see where the "stragglers" go. I wish I knew of some quick, reliable method of determining from which hive a swarm has issued. We usually have some one in or near the apiary during swarming hours, but occasionally a swarm manages to hang itself up unobserved, and the best that we can do, on short notice, is to note the absence of bees going out and in at some hive, look upon the ground in front of the hive for young bees that are too young to fly, but have attempted to go with the swarm, then if the indications are favorable, take a "peep" into the honey boxes. By opening the hive, of course all doubts can usually be set at rest.

Question: "Are old combs better than new ones for wintering bees?"

W. Z. Hutchinson: I have given foundation to colonies in the fall, fed sugar and had the foundation drawn out and filled with the sugar, and the bees wintered as well as those having old combs. Old combs often contain old stores, and when the bees winter better than upon new combs having new stores, the success has been attributed to the age of the combs.

D. York: I have hived swarms upon old, empty combs, and allowed other swarms to build their own combs, and the swarms having the old combs wintered best.

Question: "How to winter bees?"

Noble York: I have tried different methods, but consider an equable temperature of great importance.

The President: My bees out-of-doors have suffered this winter severely; the bees in the cellars, too, have suffered. I have lost 30 colonies, mostly from those out-of-doors. Last fall I buried 16 colonies; a few days ago I feared that water was getting in, and I dug them out. Two colonies were dead, but the remainder were in fine condition.

A. Haines: I have wintered bees by burying them in clamps. I did not take them out until soft maple was in bloom. They came through all right.

Geo. Gunnell: Several years ago I wintered a small colony by burying it 4 feet deep in the sand. I stood some barrel staves up around the hive, put straw around them, and then shoveled on the earth.

M. D. York: Although the character of the food may have much to do with the success of wintering, I think that outside influences play an important part. The breath of the bees, aided by the alternate freezing and thawing, wet the combs and lead to dysentery.

W. Z. Hutchinson: What kills our bees in winter? Do they starve to death? Not often. Do they smother? Seldom, if ever. Do they freeze to death? It is possible that occasionally a weak colony does, but it does not occur very often. Is it not the so-called dysentery that causes nine-tenths of the losses? If we could prevent dysentery, what would the other losses amount to? One man thinks it cold that causes it, and he builds a frost-proof cellar in which to winter his bees. All goes well for a few years, and then comes a spring when he carries from his cellar hive after hive containing nothing except dead bees and soiled, ill-smelling combs. The cold theory is dropped. If this man has a neighbor whose hives were well ventilated, and whose bees wintered well, even if they were out-of-doors, he probably adopts and adheres to the ventilation theory until there comes a winter when his neighbor's bees die and his own live, when he drops it for something else.

Bees have passed the severest winters unprotected and came through perfectly healthy; under similar circumstances, in another winter, they have died before the winter is half over. Bees have been wintered in dry warm cellars, and in other winters they have died in the same cellars. They have lived and again they have died in damp cellars. These statements appear to be conflicting, and also discouraging, but they are facts, why ignore them? It is only upon one hypothesis that I can explain these apparently conflicting statements, and that is that the primary cause of the so called dysentery is improper food.

Honey is not a chemically pure sweet. It is sometimes gathered from cracked or decaying fruit, from cider mills, from the secretions of plant lice, and is almost more or less composed of vegetable matter, floating grains of pollen, for instance. To sustain life and keep up the animal heat, bees eat food; in time the intestines become over-loaded with fecal matter, and if the confinement is continued long enough the contents of the intestines are discharged in the hive. The less vegetable matter in the honey the longer confinement the bees can bear. Just so far, protection lessens the consumption of food, just so much it prevents dysentery; as the less food consumed the longer can confinement be borne. Let us suppose that the honey of one season is largely composed of vegetable matter, and the combs well filled with pollen, and the winter that follows is unusually severe. Bees in cellars and clamps will suffer, and many will die from dysentery; those out-of-doors will be almost entirely swept away, and the universal verdict is in favor of cellars. Let us suppose that the winter had been an "open" one, the bees in the cellars would have suffered just the same as before, while those out-of-doors, having enjoyed frequent flights, would have come through in a healthy condition. Let us suppose that a long, cold winter should follow a season when the honey was of an excellent character. The bees in doors would suffer but little if any from dysentery, while those out-of-doors might suffer to some extent. Now, if the winter had been warm, the bees in cellars would have wintered just the same, while those out-of-doors would have remained entirely free from it.

Unfortunately we have no practical means of determining whether or not honey is fit for winter food, and the only thing that remains for us to do is to remove the honey in the fall and substitute for it a food of whose fitness as a winter food we are assured. Such a food we have in cane sugar. It is a better winter food than even the best of honey. Its heat producing qualities are very much greater, while the residue left, after digestion, is almost nothing. I have conducted experiments for several years with granulated sugar for winter stores, and I am convinced of its superiority. I have had every colony out-of-doors die of dysentery except those that had sugar stores. I have had two-thirds of the colonies in my cellars perish with dysentery; the third that survived was mostly sugar-fed colonies. They were clean, sweet, dry and healthy, while colonies with natural stores by their side were dead and fairly rotten with dysentery. I have yet to have a colony with sugar stores die of dysentery.

How shall we "spring" our bees?

"Spring management of bees," was the next question. W. Z. Hutchinson: If they are wintered in perfect health, they will "spring" themselves. President Van Patten: That is it. Put down his answer, Mr. Secretary, we do not need any more discussions on this question.

Question: "When to remove bees from winter quarters?" W. Z. Hutchinson: I would not remove them until willows and soft maples were in bloom. Last spring I removed the bees the middle of April. They seemed to prosper, and soon had brood in 3 or 4 combs. The fore part of May the thermometer showed the mercury at 32°, and this temperature lasted a day or two. The bees formed themselves into a compact cluster in the centre of the hive, and large quantities of brood perished. Not only this, but the extreme cold for the season seemed to be, to the old bees, like "the last straw that broke the camel's back," large quantities of them dropping down dead; and small colonies soon dwindled away to nothing. Now, would it not have been better if these colonies had not been removed until after the cold weather had passed? When at the convention at Lapeer, Byron Walker mentioned leaving a colony shut up accidentally until the season was well advanced, but it seemed to be none the worse for its confinement, and gave as good results as those that had enjoyed their liberty from the first.

On "Shade for Hives." W. Z. Hutchinson said: I use a shade board 2x3 feet, made by nailing the butts of shingles to a strip of inch board 4 inches wide and 2 feet long. One edge of the board is placed even with the north side of the hive; the board thus projects east, south and west from the hive, and shades it in the middle of the day, but not at night and morning. The board is kept in place by a stone.

Mrs. Coffeen: Why not place the hives under apple trees?

W. Z. Hutchinson: If there were only a few colonies, and the limbs were not so low as to strike over head, it might answer; but with a large apiary, the hives would be too much scattered.

M. D. York: I like to have the hives so arranged that I can work at the rear.

Comb foundation received considerable discussion, but nothing new was elicited.

Adjourned to meet in Vassar the second Wednesday in January, 1885.

Rogersville, Mich.

☞ The Union Kentucky Bee-Keepers' Association will hold its spring meeting at Eminence, Ky., on April 24, 1884.

G. W. Demaree, *Sec.*

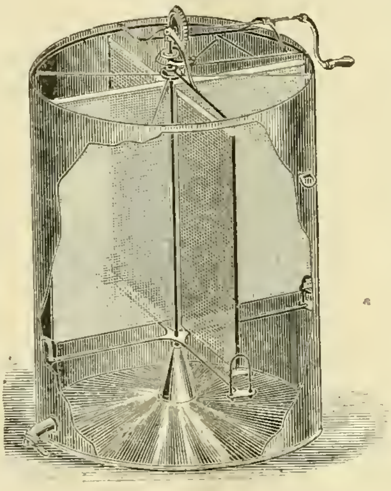
For the American Bee Journal.

Automatic Honey Extractor.

G. W. STANLEY & BRO.

I would like to describe my honey extractor, which not only takes the honey from four combs at once, but also reverses or changes sides with the combs, after one side has been extracted entirely, by reversing the motion of the crank. The comb baskets, or pockets to hold the combs, are made of wire cloth, large enough to contain the size of the comb used, with sufficient space inside so that the combs may be conveniently placed in the comb baskets, without injury to the comb.

As the machine stands at rest, the comb baskets hanging from the outside of the reel, point directly toward the centre. The top of the reel is made by an iron cross, attached to a hoop that will just revolve inside the can. Midway between where the arms of the cross are attached to the hoop, are fastened four small metal hooks, to support the four comb baskets. The bottom of the reel is made with a cross, like the top, with the exception of having a cross-piece at the end of each arm. Two holes are drilled through these cross-pieces near the ends, 3 inches apart, and through these holes are passed the two rods of an arch, which rises 3 inches above the cross-piece; the arch is fastened in the cross-piece by a nut above and below the cross-piece. A vertical rod passes through the two crosses at the centre. The pinion to connect with the cog gear wheel at the top is placed near the top of the rod with the end of the rod running through the pinion and into a bearing in the casting that forms one of the bearings for the crank shaft. The bottom of the vertical rod rests on a cross bearing at the bottom of the Can. The lower cross is fastened to the vertical shaft, by means of a set screw; after which the upper cross is turned, so that the hooks come directly above the centre of the arches at the bottom of the reel; the top cross is now secured to the vertical shaft by another set screw.



To make everything secure, and also to form the sides of the reel for the comb baskets to swing against, we provide as follows: Take a strong galvanized rod and fasten one end to the hook at the top of the corner of No. 1, and the other end to the bottom of corner No. 2; now take another rod and run from the top of corner No. 2 to the bottom of corner No. 1; fasten securely at the ends, and at the centre where the two rods cross. When all sides are provided for in this way, the reel is complete.

The comb baskets are made to slip on to the hook at the top, and at the bottom they have a double crotch that fits the arch at the lower corner.

As the extractor stands at rest, the comb baskets all point toward the centre, and the crotches rest squarely against the rods of the arch at the bottom corner.

As the reel begins to turn, the comb baskets are all thrown off the vertical centre, and all pass around in one direction, resting on one rod of the arch, and take their place against the sides of the reel.

As the comb baskets pass around to the sides of the reel, the edge that hung next to the centre will be carried upward about one inch; hence, as soon as the motion stops, the weight of the combs and baskets carried them back again, pointing toward the centre. By reversing the motion the comb baskets are carried around in the opposite direction, and the honey is thrown from the other side of the combs. By applying the "brake" to the pulley near the upper end of the rod, the motion is again stopped, and the combs again swing back, pointing toward the centre, and the combs are removed.

In order to make the action of the comb baskets more rapid, we attach one end of a small coil spring to the bottom of the comb basket, and the other end to the rod of the arch on the same side. This holds the bottoms of the comb baskets in place, and aids in bringing them back to the centre more quickly, so that they will be ready to remove as soon as the motion stops. The extractor will work well without the springs, but time will be saved by using them.

Wyoming, N. Y.

For the American Bee Journal.

Jefferson County, Neb., Convention.

The Jefferson County Bee-Keepers' Association met at Endicott, Neb., on Saturday, March 15.

The President being absent, Mr. Hincle was chosen President *pro tem*, after which the constitution and by-laws were read and new members were enrolled.

The first business was listening to a report from members on the present condition of bees, and the methods of wintering.

Mr. Atkinson uses Langstroth hives and wintered in the cellar. He reported all in fine condition.

Mr. Wing wintered on summer stands; confined his bees to 5 frames; used the Langstroth hives, division-boards, chaff cushions on sides and top, and reported all in prime condition.

Mr. Hincle uses Langstroth hives, and winters his bees in the cellar. He also reports the bees doing finely.

Mr. Myer uses Mitchell hives; winters his bees on the summer stands, without any special preparation or extra care, and all are healthy and in prime condition.

The question of how to prevent spring dwindling was discussed.

Mr. Hincle gives his bees a flight in the spring; cleans their hives and returns them to the cellar until there is something in the field for them to work on.

Many other questions of interest were discussed.

On motion, Dr. Abbott was requested to prepare a 30 minute address for the next meeting, which will be held April 12, at 1 p. m., in Touzalin Hall, Endicott. S. HINCLE, *Pres.*

J. H. TAIT, *Sec.*

For the American Bee Journal.

When Shall we Extract?

WM. H. BALCH.

This is a question of importance, and one that I have been asked so many times that I ask a little space in the BEE JOURNAL to answer.

I am aware that many tell us that honey must be sealed and ripened on the hives to give it the right flavor, consequently we have to tier up or lose much honey. This is expensive, for it takes hives, combs and the cappings which are used, which the bees would use in building comb, if we left them an empty frame where it is prudent to do so.

All animals, cats, dogs, horses, cows, and sheep, have a scent peculiar to themselves. Any one that has opened a nest where mice congregate in a mow of grain, during the cold winter months, will not quickly forget its odor.

What would be the result if butter was stored in the cow stable? Any dairy maid will tell you it soon would partake of the odor to such an extent that it would be spoiled for use. Honey is just as sensitive to odor as butter, and my experiments have led me to think more so.

Honey ripened on the hive has a flavor pecular to the bees; while if extracted as fast as gathered and ripened afterwards, it has a much finer flavor. How shall we ripen it? I will tell you the results of my home trade which satifies me that the honey is all right.

If the honey is very thick, as it is in a dry season, I leave it in the receptacles used for storing, with the covers off. Sometimes the top of the honey will have to be taken off and be warmed a little. During the past season I did not heat any. If the honey is thin and has a raw taste, I place it on the stove and heat it slowly, stirring occasionally until scalding hot, stirring occasionally while cooling.

I have practiced the above for ten years, and have yet to learn of one complaint. Be very careful not to scorch it, for that will spoil it. If heat to near scalding, it will not candy very quickly. I sell most of my extracted honey after it is candied. My home trade has grown so that I have orders for 150 pounds from a single farmer, for family use. Perhaps, sometime, I will tell you how I have built up my home trade.

Oran, N. Y.

Bay of Quinte, Ont., Convention.

This Association met at Belleville, Ont., Feb. 19, at 11 a. m., Pres. P. C. Demsey in the chair. Subjects discussed were as follows:

1. "Marketing honey."

A. McClatchie said that honey was often forced on the market far below the market value, by persons who really did not know its commercial value.

W. C. Wells said that the honey marketed was often injured by persons not knowing the quality or value of honey they had to dispose of, so long as it was honey; basswood and buckwheat honey frequently sold at the same price, when in reality there was at least 4 or 5 cts. difference, per pound.

J. A. Chapman sold most of his honey at Port Hope, Cobourg and Baltimore; sold his extracted honey at 11 to 12½ cts. per lb., and comb honey, in 1 lb. sections, generally at from 15 to 20 cts. Had crates, nicely fitted up, holding 9 lbs. and 52 lbs. He thought it advisable to make a good display of honey at our county fairs. He exhibited 800 lbs. of honey at the Industrial Exhibition at Toronto last Sept.

H. G. Stafford thought the honey market was ruined by peddling honey around. He sold his extracted honey at 10 cts. per lb., wholesale, and retailed it at 12½ cts. per lb.

C. W. Post said he could produce honey better than he could sell it; sold extracted honey from 10 to 12½ cts. per lb.

The President said we should educate the people, so that they could readily tell poor from good honey. He had seen honey selling in Toronto market at 15½ cts., while his sold at 20 cts. per lb., simply because his honey was in good condition for marketing; he said that frequently one cent per pound extra cost in putting honey in first-class condition for marketing, would command 4 or 5 cts. more per pound on the market. Great care should be taken to place honey on the market in first-class condition.

J. H. Ruttan sold his honey principally at Cobourg, at 20 cts. per lb. for his comb honey.

L. W. Sarles had been engaged in bee-culture for 8 or 10 years, and sold extracted honey at 11 cts. in cans. He thought the best way to put up honey was in kegs, holding from 100 to 150 pounds.

Edmund Caverly had no trouble to sell his extracted honey at 11 cts.

A. McClatchie sold his honey principally in the Montreal market by the barrel at satisfactory prices; he did not like foundation comb unless very thin.

D. J. Hawley sold his honey at Trenton at 12½ to 15 cts. for extracted, and 20 cts. for comb honey.

Wm. Rose sold his comb honey in Rednerville, or on Belleville market, at from 10 to 12 cts. per lb. Did not extract any.

2. "Putting up Honey for Market."

W. C. Wells said small packages sold best; 1 lb. glass jars and small kegs. It was then

Resolved, That in the opinion of this meeting, 10 lb. tin and glass cans, and kegs holding from 150 to 200 lbs., for extracted honey, and 1 lb. sections, and honey boxes from 5 to 10 lbs. for comb honey, are preferable for marketing.

3. "Preparing bees for winter."

L. W. Sarles put a rack on the top of the hive after removing the cap, with 2 inches of dry sawdust; gives plenty of good honey, and about the middle of November, puts them into their winter quarters.

W. C. Wells gives each colony about 6 sections of 3 or 4 lbs. each, of best sealed honey, and put them into the cellar not later than the middle of November.

C. W. Post: When the honey flow is over, examines all his hives, and if he finds any weak colonies, he immediately feeds them, or gives them additional frames of honey, and thus makes each strong before it is put into winter quarters; and he usually made a small hole through each frame, so that the bees can pass through from one frame to another.

W. A. Roblin thought it would be desirable to smoke the bees lightly before putting a hole through the frames.

A. McClatchie keeps his bees in a cellar built especially for wintering his bees, at a uniform temperature of 41°; does not disturb them; believes it a mistake to meddle with bees after they are put into winter quarters; thinks that vegetables stored in the same cellar are somewhat injurious to bees; keeps his hives at least 2 feet above the ground and below the ceiling, and 2 feet away from the walls, and always keeps his cellar dark.

W. C. Wells keeps sawdust, about 2 inches thick, on the top of his hives, and ventilates from the bottom of the hive; has his cellar ventilated by 4-inch tile, and finds his bees are healthier when a proper distance from the bottom of the cellar.

A. B. Mallory leaves the quilts on the top of his hives; puts chaff on the top end sides, and with proper ventilation they winter well; thinks the month of April the most trying month in the year on bees.

D. J. Hawley said that a cellar may be too dry as well as too damp; recently his bees were very much disturbed, and he placed some water in a small vessel in front of each hive, and in the evening of the same day found them all quiet.

P. C. Dempsey would not disturb bees in winter; frequent handling causes much uneasiness among bees in winter; his cellar is perfectly dry, and thoroughly ventilated.

3. "Spring Management."

J. H. Peck read the essay as published on page 196 of last week's BEE JOURNAL, on spring management, by Allen Pringle, of Selby, Ont. The concluding paragraphs, not there published, are as follows:

I have said nothing about early queen rearing, or the production of drones. Nor is it necessary for me to do so, as almost every bee-keeper of any experience has a plan of his own for queen rearing, which he considers *the* plan and *the very best* plan. Of course, like all the rest, I have my plan too, but as I have never made queen rearing a specialty—having simply raised for my own use—I do not suppose I could instruct many of you on this point. And my paper is already long enough, perhaps too long.

In conclusion I must express my great satisfaction at the present bright prospects of apiculture in this Province. We have now not only some very able practical apiarists in Ontario, but we are getting a corps of good writers and exponents as well. In both respects we will, I hope, soon be able to hold our own very creditably with our American brethren across the Lake. D. A. Jones, our fellow countryman, as an enterprising, practical and successful bee-keeper, stands in the front rank, is perhaps the greatest, in these respects, in the world. In Western Ontario the bee-keepers are, no doubt, ahead of us here in the East, that is, in the extent of the business. That they know any more about the science and art of apiculture than we do, we will just have the egotism to deny.

Bee-culture in this section of Ontario lost a valuable representative when the Hon. L. Wallbridge, ex-President of *Ontario Bee-Keepers' Association*, left the Province. The science of apiculture ought, in the interests of its literature and cultured exposition, to have among its devotees in any country a few learned and cultured men to creditably represent the system in its scientific aspects. In this respect the learned Chief Justice of Manitoba is a serious loss to us as bee-keepers.

In conclusion be assured of my best wishes for the success, and my active co-operation in the work, of the *Bay of Quinte Bee-Keepers' Association*.

A very hearty and unanimous vote of thanks was tendered to Vice-President Pringle for his able and exhaustive paper on "Spring management of the apiary." After a brief discussion on the paper, the association adjourned till 9 a. m.

Feb. 20 the association resumed at 10 a. m. The question of "Spring Management" was taken up. Mr. Sarles spoke on the advisability of spring feeding of "weak colonies," and Mr. Dempsey disapproved of that system.

Mr. Dempsey advocates heat under the hive, by means of manure pits, with a board placed over the manure, for the hives to rest on, thereby receiving bottom heat, and by judicious feeding he had caused his weak colonies to become strong much earlier in the season, and ready to commence with the natural flow of honey.

J. A. Gilbert says his bees will produce young brood at a temperature of 50°. He put 13 colonies in the cellar, and in the spring had about "3 pecks of dead bees," but he never had bees come out stronger.

B. J. Hawley realized about 20 per cent. more by producing comb honey than by extracting.

P. C. Dempsey could make more money by selling his comb honey at 18 cents per pound than by extracting, but it was more trouble to produce it.

T. A. Chapman said that extracted honey would be the honey of the future.

4. "Best method of removing bees."

Mr. Stafford had removed bees at all seasons of the year, but did not like to remove them in winter.

J. A. Gilbert removed bees at all seasons, and had always been successful.

P. C. Dempsey had removed bees at all seasons of the year, but he had sometimes had sustained losses, which, on investigation, was the result of mismanagement, but, on the whole, he had been successful.

5. "How to prevent swarming."

Mr. Stafford said plenty of room and lots of air would keep down the swarming impulse to a large extent.

6. "Best hive for comb honey."

Mr. Stafford uses the two-story Langstroth hive, and never had a section of honey to melt from excessive heat.

L. W. Sarles makes his hives and frames all the same size. He thought the Langstroth hive the best.

T. A. Chapin had been troubled considerably by the use of different sized hives and sections.

A. McClatchie kept only one size, and preferred the Langstroth.

After some routine business, the Convention adjourned.

Convention Notices.

☞ The Wabash County bee-keepers intend to organize a county association on Friday, April 11, 1884, at 10 a. m., at the Court House in Wabash, Ind. All bee-keepers of this and adjoining counties are requested to meet with us. H. CRIPE.

☞ There will be a meeting of the Kansas Central Bee-Keepers' Association at the Grange Hall in Manhattan on April 5, 1884. The following papers have been secured: "Forage plants for bees," by Thomas Bassler, K. S. A. C.; "Pleasures and dangers of bee-keeping," by Robert Corbet, of Manhattan; "Ancient and Modern bee keeping contrasted," by S. B. Kokanour, of Manhattan, and a paper by Aug. L. Entsminger, of Silver Lake, Kans. There will be election of officers, etc. THOS. BASSLER, *Sec.*

☞ The Eastern Indiana Bee-Keepers' Association meets at Richmond, Ind., April 24, 1884.
C. N. BLOUNT, *Pres.*
G. REYNOLDS, *Sec.*

☞ The Northern Ohio Bee-Keepers' Association will hold its annual meeting in the City Council Chamber at Norwalk, O., April 24, 1884, commencing at 10 a. m. A full attendance is requested. S. F. NEWMAN, *Sec.*

☞ The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers convention. All are earnestly invited to attend. A. A. FRADENBURG.

☞ We will organize a bee-keepers' association at the Court House in Franklin, Ind., at 10 a. m., April 5, 1884. All bee-keepers are invited to attend and take part in the organization. L. R. JACKSON.
Urmeyville, Ind., Feb. 26, 1884.

☞ The Mahoning Valley bee-keepers will hold their next meeting in the Town Hall at Newton Falls, O., on Thursday, April 10, 1884, at 10 a. m.
E. W. TURNER, *Sec.*
L. CARSON, *Pres.*

☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyhoga County, O. All interested are invited. J. R. REED, *Sec.*

☞ The next meeting of the Bee-Keepers' Association of Central Illinois, will be held in the office of the County surveyor, in Bloomington, on Wednesday April 9.
W. B. LAWRENCE, *Sec.*

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.
WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

☞ All bee-keepers of Northern Kentucky, and persons wishing to engage in bee-culture, are requested to meet in the city of Covington, on April 9, 1884, at 10 a. m., for the purpose of organizing a bee-keepers' association. The meeting will be held in Walker's Hall, southwest corner of Sixth and Madison streets.—L. A. Armstrong, H. J. Aylor, Alex. Stith, Peter McVane.

The Marshall Co. Society will meet Saturday, April 5, at 10.30 a. m., at the Court House in Marshalltown, Iowa. Bee-keepers of adjoining counties interested in bee keeping, are invited. J. W. SANDERS, *Sec.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884.
JONATHAN STEWART, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Home Market for Honey.

My honey was all sold in my home market, and I would advise all bee-beepers to adopt the same plan, at least as far as possible.

W. Z. HUTCHINSON.
Rogersville, Mich., March 20, 1884.

Wintered Well.

Bees managed by improved methods have wintered very well, but box hive men and careless bee-keepers have lost heavily in this section.

DWIGHT FURNESS.
Furnessville, Ind., March 21, 1884.

Winter Severe, but no Loss of Bees.

Our winter has been very severe, but up to date my bees have wintered well and without loss.

WM. BITZER.
Wheeling, W. Va., March 21, 1884.

First Swarm of the Season.

I hived my first swarm to-day. Elm, maple, plum, peach and pear trees are in bloom. It has been warm for about two weeks; bees are booming, the hives are full of young bees, and they are working with vim.

Z. A. CLARK.
Arkadelphia, Ark., March 25, 1884.

Feeding Bees Now.

My 56 colonies of bees never wintered better. I have lost 7, all by starvation. I never had them consume stores as they have this winter; caused by not having any flights to decimate their numbers, and very few dying in the hives. There was a large force to be fed all winter. I was not aware of their condition. I am feeding them heavily with confectioner's sugar, and think I shall lose no more.

WM. MORHOUS.
Dearborn, Mich., March 25, 1884.

A Good Beginning.

The BEE JOURNAL is read weekly with great satisfaction. After Dr. Baker sent it to me, I thought I could not do without it, although I did not have a single bee; so, of course, I sent $2 for it. In the spring of 1883 I bought 2 colonies, blacks, in box hives, with a few moths in, which I cleaned up, sent for Langstroth hives, which came in time for the swarms, which were hived according to its instructions and were worth the whole year's subscription; but that is not all the value received from it, for in addition to the 7 swarms—strange as it may seem—I have taken 398½ lbs. of comb honey, mostly in two-pound sections, which I have sold at from 2½ to 5 cents above the market for crushed jar honey. I had to feed but little sugar besides the unfinished sections (which were not weighed) to 3 colonies. I have kept a strict book account with them, which stands thus: Hives, foundation, sections, smoker, JOURNAL, and 2 colonies of bees, cost $25. 400 pounds of honey at 15 cents, brought $60, leaving a balance besides the bees, etc., of $35. The result on our market is our merchants return very reluctantly to their jars at 12½ cents. Their customers also do so, only after inquiry for "the little boxes." In canvassing for my club to the BEE JOURNAL, I met one box-hive man who had paid $10 for the right to make a hive for his own use, and instructions how to feed his bees beef, and they would make him honey all winter.

B. F. HAMILTON, M. D.
Terre Haute, Ill.

Honey Granulated in the Fall.

Spring opened beautifully, and but for the two or three freezing checks since, the bees would have swarmed by the middle of this month; as it is, it will be deferred until about the first of April. My crop, the past season, was 8,500 pounds from 40 colonies, spring count; increased to 70. All honey quickly granulated last winter, and even in full colonies, both capped and uncapped, honey granulated in the cells. Can you tell me why it should have done so? Can it be removed in any way, or will the bees do it?

W. T. MADDOX.
Alexandria, La., March 17, 1884.

[The granulation was caused by some peculiarity of the atmosphere, no doubt. The bees will take care of it, and use it all to advantage.—ED.]

Bees all Right.

My 25 colonies of bees were put in my cellar about Nov. 1, with plenty of honey, and I left all of the pollen or bee bread in the hives this winter, and they have been shut up by the cold ever since. Up to this date they are all right, with no signs of dysentery, and have plenty of capped brood, and brood in all stages. My cellar was prepared for them with tile, and has a 2-inch tin pipe connected with the stove pipe, and running within about 2 feet of the cellar bottom. The thermometer has been all winter from 45° to 50°, until the last cold snap, 2 or 3 weeks ago, when it went down to 32°; but now it has got back to 40°, and seems to stay there. My bees seem to keep very quiet, and every one answers to roll call.

E. L FREDENBURG.
Fentonville, Mich., March 21, 1884.

How Far do Bees Fly?

Mr. Pettigrew is certainly very much mistaken in his opinion of the distance bees fly for stores, else the bees in the United States are better travelers than those in the old country. I take pleasure in adding my testimony in corroboration of that of Mr. Doolittle in regard to the matter as follows: In 1865-66 I stocked my apiary with Italian bees; they being the only ones within miles of me, except those of a friend some five miles south. During the fall of 1865, I was asked to look over some black bees kept by a friend some 4½ miles north from my apiary, and, after examining them, was led by curiosity to see whether any yellow bees were visiting a field of buckwheat in the vicinity. To my surprise I found at least one-half the bees in this buckwheat field were Italians, that either came from my own apiary or from that of my friend 5 miles further off. The next season, upon again examining these same black bees, I found the old colonies were well mixed with yellow bees, owing to the young queens meeting my yellow drones. I do not know how far bees do really fly, but in the above case they went in large numbers, at least 4 miles in a bee line.

J. E. POND, JR.
Foxboro, Mass., March 20, 1884.

Experiments in Wintering.

All experiments and observations show that the bees that have been reared here for the greatest number of years, and have consequently become climatized, as it were, have wintered best. Pure Italian stock, and bees reared from queens bred in the South, have nearly all perished, where wintered on the summer stands. Chaff packing has been of no advantage, as used by the average apiarist; some losing all of their bees; some having a few sickly colonies, which swarm out and leave the hive on warm days. Hybrid and native bees have come out ahead, and is another victory for the old-fogy bee man, who keeps his "black imps" in an undressed box hive, and whom the modern and more intelligent apiarist will be obliged to seek out and purchase bees of again, to preserve his moldy combs, and to continue his experiments on the wintering problem another season. I will give you the result soon of experiments on wintering on the summer stands, packed in chaff; also, of cellar wintering and of burying in the earth.

S. J. YOUNGMAN.
Cato, Mich., March 26, 1884.

From Tennessee.

I have sold out here and intend moving my apiary to Sparta, Tenn., next week, where I will have a much better place for an apiary than here. Sparta is the county seat of White County; lies at the base of the Cumberland Mountain. The bees will have access to immence quantities of whitewood, or poplar as it is called here, sourwood, basswood, cucumber, soft and hard maple, white clover, etc. I am receiving a great many letters of inquiry concerning this county, or this State, from Northern bee-keepers who think of coming South. I advise them not to be in a hurry to leave homes in the North to come South. Moving costs money, and while you will find some things here that you will like better than in the North, there will be many things that you will not like as well. If you do come South, do not be in too much of a hurry to buy land. Stay out of the hands of land agents; if you want reliable information, go to some native that has no land for sale. Stay off of the barren lands. I know of some good localities for bees that are not occupied, but as a general rule the best places are a considerable distance from the railroad. It has been a very wet, cold and disagreeable winter here; the mercury was as low as 15° below zero. Farmers say the spring is a month later than usual.

I. B. GOOD.

Tullahoma, Tenn., March 22, 1884.

From Wataguga Apiary.

My bees all wintered well; they are in the Deihl improved hives. I lost none, and they are storing honey very fast, for this season of the year. I saw one sheet of drone comb full of eggs to day, and I think I will have a swarm off in less than three weeks. This is my second year, and I am having splendid success.

H. C. AUSTIN.

Austin's Springs, E. Tenn., Mar. 24.

Better than Average.

We have had a very cold winter. The mercury was at and below zero 27 times. We put 124 colonies in the cellar before they got frosty. To-day we finished taking them out. All answered to the roll, but one. They seem to be in more than average good condition for this date. The cellar is dry, kept above the freezing point, and mostly at about 45°.

S. L. VAIL.

Coal Creek, Iowa, March 27, 1884.

Bees Wintered on Summer Stands.

Total number 60; loss 6; queenless, to-day, 3; total decrease 9; first pollen gathered March 23; had hatching bees Feb. 1. Bees flew less in February and March than any other months; in fact, they only flew 3 or 4 times in this month. There was some dysentery in January, but good flights checked it. Would have lost heavily, had they been confined all winter, but as it is, I never had bees in better condition at this time of year.

R. C. AIKEN.

Shambaugh, Iowa, March 27, 1884.

Tests in Cellar Wintering.

When my bees were put in the cellar, one dozen brood-chambers were covered with enameled cloth, another dozen with thick cushions, and all others with thin cushions. Every colony was supplied with the purest of honey and pollen for stores. All were perfectly dry, and almost as still as death, until they commenced rearing brood. Then those with thick cushions showed uneasiness and signs of diarrhœa. An examination found them wet; but more ventilation produced quietness, and the disagreeable odor disappeared. Those with thin cushions have remained as quiet as possible. Those with the enameled cloth are in fine condition, but make a great hubbub when they see a light or small a little fresh or warm air, while the others keep perfectly quiet. With a few thick cushioned exceptions the bees appear as small as when set in. I have made one other test similar to this in a cold cellar, and the colonies having the thickest cushions and enameled cloth over the brood-nest came out decidedly in the rear. Dead bees do not accumulate on the bottom boards, as I leave them on the stands, and set the hives on inch blocks. While I am uncertain whether diarrhœa is caused by the annoyance of water getting into the brood-nest, the sipping up of it after getting there, its getting into the honey, or all combined, I am positive that water is almost invariably present in or nearly if not directly above the clusters of diarrhetic colonies, and that it can and does get there by an easy and well understood method.

C. W. DAYTON.

Bradford, Iowa, March 25, 1884.

Hives, Frames and Bees.

I have handled bees for several years, but I am not experienced in apiculture, as I keep them chiefly for pleasure. I am a farmer, and bees are not very profitable in this portion of the State. I expect to make bee-culture profitable, if it can be done in this portion of the State. I have nothing but the native or German bees. In 1882 bees did well; every flower and shrub of the forest seemed to secrete an unusual amount of nectar, while 1883 was the reverse; bees having to be fed almost the entire season to prevent them from starving. This season bids fair for a good crop of honey. Bees winter well here on the summer stands, in box hives, without protection. My bees have built up very fast and seem to be storing honey. I had drones flying March 15. I say box hives because frame hives are just coming into use here.

1. What hive is the best for beginners?

2. Should the frame be placed parallel with the entrance?

3. How many distinguished races of bees are now known in the United States?

4. Did not all the yellow banded bees descend from the Italian race?

5. What race of bees have the most yellow bands? L. B. SMITH.

Cross Timbers, Tex., March 28, 1884.

[1. We prefer the Langstroth hive for all purposes.

2. The ends of the frames should run towards the entrance.

3. The natives or blacks, Italians, Cyprians and Syrians—all others have come from the above.

4. Yes.

5. The Italians.—ED.]

Honey Dealers and Separators.

I heartily endorse H. D. Hubbel's article in the BEE JOURNAL of March 26, on the advantages of the use of separators, from a commercial standpoint, and wish that every one would use them, or something else to insure a smooth and uniform comb. I occasionally have a complaint of tardy returns, but it has never been on a lot in which the combs were nice, white and smooth, and cases not too large. I believe I could average 10,000 pounds of comb honey a month, the year round, if it was uniform in all respects, so that one lot would be a fair sample of all. It is the irregularity of shape and condition of comb honey that renders it so difficult to sell, without out the purchaser's seeing it before hand. Let sections, combs and cases be uniform, and all will be benefitted.

JEROME TWICHELL.

Kansas City, Mo.

Bee-Keeping in Indian Territory.

My 14 colonies in frame hives are in splendid condition. Here honey is worth 20 and 25 cents per pound. There is no cultivated forage nearer than seven miles. My main source is rattan vine and ague-root, though there are flowers for bees to work on from the time cottonwood blooms till frost. I should like to hear from other bee-keepers in this territory, if there are any.

G. PRIEST GRINSTEAD.

Oakland, Indian Ter., Mar. 25, 1884.

Local Convention Directory

1884. *Time and place of Meeting.*

April 5.—Marshall Co. Iowa, at Marshalltown.
J. W. Sanders, Sec.

April 5.—Kansas Central, at Manhattan.
Thomas Bassler, Sec.

April 9.—Ass'n of Central Ills., at Bloomington.
W. B. Lawrence, Sec.

April 9.—Northern Ky., at Covington, Ky.
L. A. Armstrong and Others.

April 9.—Lorain Co., at Elyria, O.
O. J. Terrell Sec., North Ridgeville, O.

April 10.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.

April 12—Texas Central, at Waco.
I. W. Grayton, Sec.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Union Ky., at Eminence, Ky.
G. W. Demaree, Sec.

April 24.—Eastern Ind., at Richmond, Ind.
M. G. Reynolds, Sec.

April 24.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

April 24.—Western Michigan, at Berlin.
F. S. Covey, Sec.

April 24, 25.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 3.—Progressive, at Bedford, O.
J. R. Reed, Sec.

May 6.—Cattaragus Co. N. Y., at Randolph, N. Y.
W. A. Shewman.

May 6.—Southern Wisconsin, at Janesville.
J. T. Pomeroy, Sec.

May 15.—Tuscarawas Co. O., at Port Washington, O.
A. A. Fradenburg.

May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Seo.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Shall I Feed Sour Honey?

In the fall of 1882 I put 6 colonies of bees into the cellar in Langstroth hives, 3 1 packed with chaff, and the rest were not packed. I took them out in January; they had a cleansing flight, and I replaced them. I took them out again one year ago to-day, and they had all died of diarrhœa. I had purchased 10 chaff hives, and so I started again with 3 colonies in the spring of 1883; 2 blacks and 1 Italian. I divided the blacks; and had bad luck in introducing queens, losing 5 queens. The Italian colony gave a swarm which went to the woods; I divided the Italians that were left, and had 2 swarms from the blacks. I had 8 colonies to put into winter quarters, each having 25 or 30 pounds of honey. I took off 50 pounds of comb honey from 2 colonies. In October I packed them with leaves and chaff, with racks over the frames, and a "Simplicity" filled with leaves, and chaff packed around the outside of it. There is not a single sign of diarrhœa. They have been flying for the last 2 or 3 days. Question: Will it do to feed the honey that was taken from those old combs last year? It is slightly sour, and is candied; if so, when and how shall I feed it? O. J. POST, JR.

Chagrin Falls, O., March 17, 1884.

ANSWER.—I should have no fears in feeding the partially soured honey you mention anytime during the next three months. Bring it to the boiling point before feeding, and feed it right away that it may be consumed before the surplus season commences. Bring it to the boiling point as quickly as possible, removing it from the fire immediately after it boils. I would advise diluting it with pure water, to the consistency of nectar, just before you put it over the fire. In this diluted state it must be kept in a cool place, and fed out as soon as possible or it will sour again.

No Winter Loss.

My bees are in the best condition I ever had them. They were wintered on the summer stands, and without any loss. I left pollen and honey as they gathered it from Spanish needles, a frame in each hive, and there are no signs of dysentery. Will Mr. Heddon please give (1) the inside measure of the rough case for winter packing of the Langstroth hive? (2.) What supports it, besides the front entrance? (3.) How high is it above the brood-chamber, when packed and set away for winter? (4.) Does it go below the bottom of the hive?

D. C. MCLEOD.

Pana, Ill., March 21, 1884.

ANSWER.—The rough packing box for the Langstroth hive may be made from 6 to 12 inches larger each way than the hive. This would leave a space of from 3 to 6 inches all around. The front part of the box rests upon the bridge, while the sides and back end rest upon the ground, or if shallower, up upon blocks or stones, as shown in the cut on page 169 of the BEE JOURNAL for 1882. By looking at both cuts you will see how much the sides and back end reach below the bottom of the hive. If you pile in chaff, leaves or sawdust, it runs out on the ground until it piles up, when the inter-space can be filled. This packing comes above the hive, piling up to the dotted line around the case D. Many of our boxes have sides and back ends enough deeper than the front end that they rest on the ground. All boxes go below the bottom of the hive because the hive is upon a stand 6 inches high.

Virgin Queens in March.

I want to ask whether such a queen is profitable or not? I am aware there are no drones yet; but the question arises here, whether such queens will be as prolific as any other or not. The cause of this queen is, that a colt got among my hives and upset one of them, and the next morning I found the bees all on the ground. I gathered up the bees and combs, put them in the hive, and brought them in the house by the stove, and brought them to life. I noticed they had brood in all stages, consequently they built a queen-cell, and now they have a virgin queen. I suppose the old queen perished. L. B. MELLATT.

Baker, Kans., March 17, 1884.

ANSWER.—Queens seldom become fertilized after they are 20 days old, in which case they are of no value. If, however, they become fertilized before that age, I have no knowledge that they are in any way inferior.

The Cause of Dysentery.

I will give my experience with it, for we all want to find what is its cause and cure. It is not a disease, but is the result of long confinement. I have now kept bees for 7 or 8 years, and, of course, I have made some observations. In the spring or fall, if the bees are kept in a few days by cold or wet weather, they will act the same as they do when we set them out in the spring; not so much, but you will see a few specks on the hives and boards around. Bees take a flight every day; most people call it playing, but I do not. It is the young bees taking a flight to exude their feces. They do this every day when it is good weather, and if they are kept in 2 or 3 weeks, they will have dysentery. The young bees have these flights in the fall. They do not have young bees from October till January. Old bees pass it off when flying after stores. Last spring a colony reared a few drones in the winter; they did not allow them to live, but threw them out at the entrance. In March or April they tried to rear a young queen; after she was from 1 to 8 days old, when I was watching the bees, I saw her come in. She was not in more than 2 or 3 minutes when she came out again. There was no young bees in the hive for 25 or 30 days, and one-fourth of them were drones. About the first of June they reared another queen, and I killed the old one, whose wings were all in strips and broken. The young queen hatched all right. The old queen's bees were one eighth black or Italian-hybrids. The young queen's bees are all Italians, and are as yellow as I ever saw. Did they kill the old queen in the first place, or did they kill the young one? I think they killed the young one and kept the old one, as the bees all looked alike. I had a colony that had the dysentery last spring; the hive was clogged with rubbish and dead bees, so that only a few bees could come out at a time. I drew the nails, and 2 or 3 frames fell down to the bottom of the hive. A little knot-hole under the honey-board they made black with their faces.

Borcoe, Ill. DAVID WATTERSON.

ANSWER.—As it is more convenient to handle every thing by its proper name, let us first settle the question of "disease." Webster defines it "lack of ease; uneasiness; distress; trouble; trial; derangement of any of the vital functions, causing or threatening pain and weakness; morbid or unhealthy condition; disorder." If bees, possessing what bee-keepers call diarrhœa, dysentery and cholera, and a something which Mr. Watterson proposes to prevent and cure, is not properly a disease, then what is it? Whatever it may be would it be likely to destroy the life of the bees and yet never become a disease? (See Webster.) We frankly admit the disease is produced by too long containance of residue from food eaten. We know that a short confinement in the spring will be more productive of the disease than one of much longer duration in winter.

If confinement alone was the cause of dysentery, there would be no such difference in time. If cold or humidity were the cause, the facts would reverse and accumulation of feces would take place in a shorter time in January and February than in April or May. If the "pollen theory" be correct, we should expect a much more rapid loading of fecal matter during the breeding season, and this is just what we realize. We cannot see from what source your colony could rear a queen, as we understand the first young queen was never fertilized or laid eggs. The only way out is to suppose that a young Italian queen came to the hive of her own accord and was accepted.

Keeping Moth Out of Combs.

Please tell me through the columns of the Weekly BEE JOURNAL what will prevent moth from getting into the combs, as I have lost several colonies? D. F. PALMER.

Yorkville, Ills., March 16, 1884.

ANSWER.—Keep the bees strong in numbers in proportion to the amount of comb they have in your possession. Keep bees with enough Italian blood in them to make them excellent guards against the moth and other enemies. Never leave any bits of comb where moth can breed in them. Whatever empty combs you may carry over the winter (not in use) expose to a temperature of 14° or below. Follow these rules and moths will be almost an extinct species in your apiary.

Making Comb Foundation.

Please answer in "What and How:"

1. In making Given foundation, is it necessary (or better) that the wax sheets should lie a couple of days after dipping, before they are pressed?

2. A manufacturer of a roller foundation machine recommends using 2 per cent. of resin in wax. to cleanse it. Would it be objectionable? If so, why? A SUBSCRIBER.

Carthage, N. Y., March 10, 1884.

ANSWERS.—1. The sheets seem to stick a little less after they are a few days or a week old.

2. I object to using resin or anything but pure wax in comb foundation. So far as I know, the bees have objected to all foreign substances. I have never tried or seen resin tried, but it is bitter and hard, and I should *guess* would make the foundation less pliable. I do not believe it would have any tendency to cleanse the wax, and think that the object in using it has been to lessen the sticking of the wax to the rollers.

Space Above Frames.

I thank Mr. Heddon for his reply (on page 155) to the question which I asked him as regards the dropping of the frame below the level of the hive. I fear he shows a lack of knowledge when he says a host of experienced bee-keepers are smiling at the question. He does not seem to know that D. A. Jones, who exhibited the greatest amount of honey at the Toronto exhibition, has his frame level with the top of his hive. Nor yet that Mr. Emeigh, who took first prize on comb honey at Toronto, has his frame level with the top of his hive. Mr. McFarlane, Tilsonburg, Ont., calls the hive he uses (being the patron of Mr. Heddon's) the Langstroth improved by Heddon. I have seen no flat cover put on the frame without a cloth between. In reference to killing the bees, there is no danger by having a cloth on top of the frame. When you put on the cloth, take it by two corners, then by throwing it a little beyond and drawing it gently to its place; if there are any bees, they will be drawn between the frames. I had asked the question of some who pretend to have the same hive as Mr. Heddon, and they all referred me to him. F. ALLEMAND.

Eden, Ont., March 18, 1884.

ANSWER.—Many of our largest producers do not exhibit their honey at all. The practice of using a cloth over the frames in summer, I cannot help thinking has grown out of illy-constructed hives. Without the cloth there is no danger of killing bees, and you can adjust the cover in one-fourth the time. If you will try a proper bee space above the frames, with flat cover and no cloth by the side of an equal number of any other arrangement, I am very confident that you will discard all others for that one.

Prevention of Swarming.

Can you tell me how to prevent bees from swarming only once? I have 15 colonies. I made a house for them, 6 inches thick, with matched boards on both sides, and filled in with sawdust. They are all raised from the bottom board ¾ of an inch. They are all right yet. The glass has been 45°, and as low as 28°. I have 2 colonies on the summer stands raised ¾ of an inch from the bottom board. This is my fifth year with bees. Last winter I lost all, and this spring I bought 7 more blacks. I do not think they did very well; they increased to 17, and gave 200 pounds of honey. Which are the best bees to keep? I find black bees a little too hot, for they will sting in mid-winter.

Utica, N. Y. B. E. FOSTER.

ANSWER.—There are many ways to prevent bees from casting first, second or any swarms. I know of none which I consider practical, or as well for the apiarist as to let them swarm, and then prevent increase of colonies by the plan I gave on page 126 of the BEE JOURNAL for 1883. Perhaps you would be better pleased with Italian bees than your Germans. It may be that your Germans are of the little black stinging strain.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*

☞ The Western Michigan bee-keepers, will hold their spring meeting at Berlin, on April 24.

F. S. COVEY, *Sec.*

☞ The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest, for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twichell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."

C. M. CRANDALL, *Sec.*
Independence, Mo.
H. SCOVELL, *Pres.* Columbus, Kans.

☞ A bee-keepers' association is to be organized in Western New York on Tuesday, May 6, 1884, at Randolph, Cattaraugus County. In this southern-tier district there are a large number engaged in bee-keeping, and an association of this kind has long been needed. A general invitation is extended to all interested in bee-keeping.

W. A. SHEWMAN.

☞ The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.

O. J. TERRELL, *Sec.*
North Ridgeville, O.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 31, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & Co.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirious of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, at 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Demand for choice white comb 1 and 2 lb. sections continues good at 16@17c. Dark and irregular comb not wanted. Extracted in fair demand at 8@9c.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Only in a jobbing way is there anything doing. Stocks are not heavy, but are larger than holders care to have them at this time of the year, especially as liberal receipts of new are expected in a couple of months. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@16c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is improving a little; are selling first-class 1 lb. sections quite readily at 18c, with an occasional sale at 19c; 2 lb. is not quite so active, at 17c. Second quality is dull at 15c. Extracted not wanted.

BEESWAX—35c, but very scarce.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

* * *

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

* * *

☞ See M. Bailey's advertisement; he has Clover Seed for sale.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

* * *

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

* * *

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

* * *

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

NEW INVENTION.

Patented Oct. 17, 1882.

Bees forced to leave their surplus honey before removing it from the hive. Saves valuable time and labor: prevents robbing, and the liability of being stung. The Bees are first cut off from the brood hive, by closing the openings in a slat honey board; the conductor is then placed in position, which connects bees in surplus honey with brood hive. They soon find that they are imprisoned, and being anxious to escape, pass out through the Conductor into the brood hive. It also prevents their return.

Conductor and Langstroth hive complete....................................	$6 00
Conductor and Honey Board, any size, and Sections to fill, which shows all the improvements....................	1 50
Conductor, by mail........................	50

Send for Circular giving full particulars.

JOHN W. SILCOTT,
14A4t SNICKERSVILLE, VA.

Albino and Italian Queens,

BEES AND SUPPLIES FOR 1884.

Those who desire **Choice Queens** shoul remember that we are Headquarters for th Albino Queens, which gave such universa satisfaction last year. We have completed our **New Shops**, and furnish Hives, Sections, Comb Foundation, etc., on short notice Send for Circular and Price Lists.

We have traded for some Hybrid and Black Bees which have fine Queens, which we will sell; Hybrid Queen, $1.00; black, 50c.

Address, **S. VALENTINE & SON,**
14A1t 5B2t HAGERSTOWN, MD

Bees For Sale!

Thirty colonies at $5.00 each, in lower Langstroth hives, in order on cars.
9D3t Dr. WM. M. ROGERS, Shelbyville, Ky.

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t **H. C. WHITE**, MADISON, IND.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BASSWOOD, MAPLE AND ELM TREES, 2 ft. and under, $2 per 100; 2 to 6 ft., $6 per 100; 6 to 10 ft., 10c. each. N. E. DOANE, Pipestone, Mich.
11Dtf

Pure Italian Bees and Queens!

Send for Price List to
A. B. MILLER, Wakarusa, Elkhart Co., Ind.
7D6t

HEDDON HONEY CASE,

Ready to nail, per 100, $15.00. Hives cheap and good. N. E. DOANE,
8D6t PIPESTONE, Berrien Co. MICH.

SMITH & SMITH

Wants to give away 5,000 of their Illustrated Catalogue and Price List of **Bee-Keepers' Supplies. Special Attention** given to the

Simplicity One-Piece Section,

Also Hives, Smokers, Foundation, etc.

SMITH & SMITH,
6D10t KENTON, Hardin Co., OHIO.

ITALIAN BEES AND QUEENS.

Send for Price List to
D. B. BROWN, DES MOINES, IOWA.
10D7t

ITALIAN QUEENS, DADANT FOUNdation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

100 Colonies of Italian Bees

FOR SALE!

Prices—$5.50 each, with 10 combs below, 8 above, without upper story, $4.50. Frames 17¼x9⅛, nice combs—little drone. Bees bred with care from imported and choice home-bred Queens. Reasons for selling—have other business. Must be sold by June 1st, 1884. Safe arrival by express guaranteed.

C. KENDIG,
Naperville, DuPage Co., Ills, Mar. 22, 1884.
14A1t 4B1t

PLEASE SEND FOR MY PRICE LIST

Of Langstroth Hives, Sections and Supplies in general, before buying your supplies for 1884. HENRY CRIPE, N. Manchester, Ind.
13A2t

HELP WANTED.—1 agent wanted in every place to sell our new goods. Big pay. 40 samples only 10c. Maps free. Cut this out
Acme Novelty Co., Clintonville, Conn.
13A8t

Italian Bees and Queens For Sale.

Tested Queens, May, $3.00; June, $2.50; after July 1, $2.00 each. Untested, after June 1, $1.00; 6 for $5.40. Full colonies in May, $7.00; 2 for $13.00; 10 for $60.00. After June 1, $1.00 less each colony. Satisfaction guaranteed. I. S. CROWFOOT,
12A8t Hartford, Wis., April 1, 1884.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
1Ctf 12Btf DUNDEE, Kane Co., ILL.

Early Spring! Order Now!

To introduce my Italian Queens, I will send one of my Tested Queens, if ordered before April 20, for $2.00. Send two dollars and less, in common letters, at my risk. Address **E. P. BAKER.**
10A8t Box 342, DES MOINES, IOWA.

ALLEY'S

Drone Excluder, Queen & Drone Trap

COMBINED.

Sample, by mail, 65c.; by express, 50c. In the flat, per dozen, including one made for model (13 in all) $3.00. Send for our 23d annual Circular and Price List of Queens and four races of Bees.

Bee-Keepers' Handy Book, bound in cloth, by mail, $1.00.

HENRY ALLEY,
9Atf **WENHAM, Essex Co. MASS.**

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14A1

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

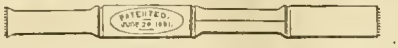
AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Maine.
4A1y

BEE-KEEPERS, before ordering your **APIARIAN SUPPLIES,** Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

"BOSS" ONE-PIECE

SECTIONS.


PATENTED, JUNE 28 1881.

We have again increased our capacity for making the "BOSS" ONE-PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS,** to

ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.,
49BCtf Watertown, Wis., Dec. 1, 1883.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

American Linden or Basswood

FOR BEES!

5 to 10 inches, per 100....................$1.50.
3 to 5 feet, per 100.......................7.00.

For sale by **Z. K. JEWETT,** SPARTA, WIS.
12A6t 4B2t

SEND YOUR NAME AND ADDRESS FOR MY 20-page Price List of Italian, Cyprian and Holy Land Colonies, Nuclei, Queens and Apiarian Supplies. H. H. BROWN, Light Street, Col. Co. Pa.
12D4t 4B1t

Given's Foundation Press,

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

The Kansas Bee-Keeper.

[ESTABLISHED IN 1881.]

One Dollar a Year.

A Live Monthly Magazine, devoted exclusively to Bee-Culture. Its regular Correspondents and Assistant Editors are among the most practical and progressive bee-keepers of the age. The well known specialist, James Heddon, of Dowagiac, Mich., will furnish a series of articles running through the whole volume. J. E. Pond, Jr., Foxboro, Mass., will continue his "Hints to beginners." The Question Drawer will be conducted by the editors, whose aim will be to make it of especial value to those yet in the A B C of bee-culture.

H. SCOVELL, J. E. POND, Jr., Editors.

Sample Copies free.

Address,

Bee-Keepers' Publishing Co.,
6C3t COLUMBUS, KANS.

Bee Hives

AND

SECTIONS.

NEW SHOP AND NEW MACHINERY!!

The Largest Manufacturer of Bee Hives Sections, etc., in the World!

Our capacity now is a **CAR-LOAD** of goods daily. Hives manufactured from soft white pine, and sections from white basswood. Send for our new Illustrated Price List for 1884. It is **very important** you should have our new List before ordering, as prices are arranged differently from last season.

G. B. LEWIS,
1BCtf WATERTOWN, WIS.

The Bee-Keepers' Guide;

Or, MANUAL OF THE APIARY.

10,000 SOLD SINCE 1876.

11th Thousand Just Out!

10th Thousand Sold in Just Four Months!

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
47D10t 18C7t LANSING, MICH.

A LARGE STOCK OF

Italian and Albino Bees

FOR SALE.

We are now booking orders for **Full Colonies, Nuclei Colonies** and **Queens** of our new strains, which gave such excellent satisfaction the past season. We also offer **Comb Foundation** and general **Apiarian Supplies.** Send for our Catalogue and read what our customers say of our goods. Address,

WM. W. CARY & SON, Coleraine, Mass.
☞ State where you saw this. 8A2t 10Ctf

HEAD-QUARTERS

IN THE WEST

For **Apiarian Supplies** of every description. Send for 1884 Price List before purchasing elsewhere.

BRIGHT BROTHERS,
10Ctf MAZEPPA, Wabasha Co. MINN.

WAX Worked on Given Press by the lb., 15c. a lb.; for 4 to 6 ft. to lb., 18c. a lb.; for 6 to 8 ft. to lb., on shares for 2-5. 1 cent a lb. for cleaning, 10 per cent. off on 50 lbs., 20 per cent. off on 100 lbs. or more; 33c. a lb. I pay for clean yellow wax. In sending wax, prepay freight, or express. Cash required when foundation is finished. **A. J. NORRIS, Cedar Falls, Iowa.**
10C3t

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

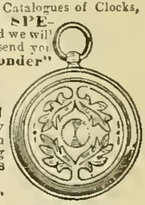
Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to
Ctf A. I. ROOT, Medina, O.

GIVEN AWAY!

This is a beautiful **solid** wedding ring made of **Heavy Rolled Gold** plate. Each ring warranted. We want to introduce our new and beautiful Catalogues of Clocks, Jewelry, Watches, Silverware, &c. at once. **SPECIAL Offer:** Send us **88c** in stamps and we will send you this elegant ring. We will also send you **FREE, as a present,** the **"Little Wonder"**



TIME KEEPER,

just as shown in cut. A thoroughly reliable teller of the time of day in a handsome Silver Nickel Hunting Case. Cut one-third size. Address

BABCOCK & CO., Centerbrook, Conn.

BEE HIVES!

Simplicity, Langstroth and Chaff Hives, Section Boxes, Brood Frames, and Comb Foundation. Send for Price List. The successors of A. B. Miller & Son.

MILLER BROS.,
51D8t NAPPANEE, Elkhart County, IND.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A NEW HIVE.

Arranged for continuous combs and continuous passage-ways. Will be found a pleasure to work with, and can be easily and rapidly managed. For comb honey it is without a rival, and as an invention, is second only to that of movable brood frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,
12A8t 4B4t AUGUSTA, GA.

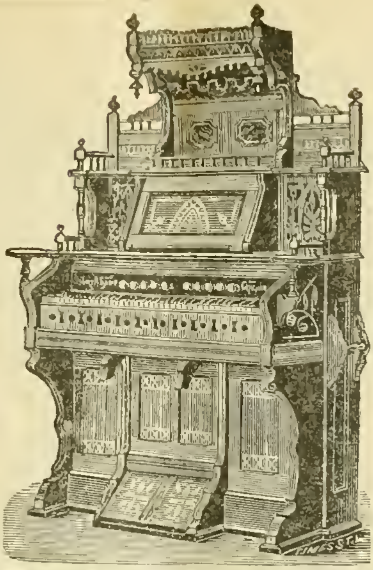
A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

32ABtf J. VANDERVORT, Lacyville, Pa.



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
Mathushek,
Simpson & Co.,
Story & Camp.

Estey,
Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street,
CHICAGO.

203 N. Fifth Street,
ST. LOUIS.

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.
MRS. FRANCES DUNHAM, De Pere, Wis.
Dear Madame:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.
Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.
Dear Madame:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.
All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.
Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNHAM: Kenton, Ohio, Dec. 29, 1883.
After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.
I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to

FRANCES DUNHAM, De Pere, Wis.

2Btf 6D6t

NEW Vegetables A Specialty.
GREGORY'S SEED CATALOGUE
1854.-1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all.
JAMES J. H. GREGORY, SEED GROWER, MARBLEHEAD, MASS.

BE SURE

To send a Postal Card for our Illustrated Catalogue of APIARIAN SUPPLIES before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.

J C S YLES,
51D15t 1B5t HARTFORD, WIS.

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

Bees, Bees! and Eggs, Eggs!

One to 200 Colonies of Italian Bees For Sale.

1 to 10, at $6.50 each; 10 or more, at $6.00 each. Tested Queens after June 1, $2.00 each. Also Eggs for hatching, from choice stock of White and Brown Leghorns, at $1.50 per set of 13 Eggs. Send Card for Price List and reference. Address to
WM LOSSING, HOKAH, Houston Co. MINN.
10C3t

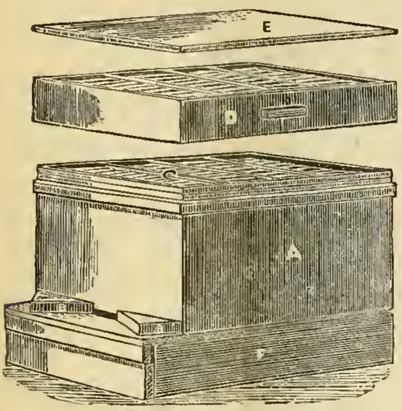
1884.

6 Warranted Queens for $5.

Write for Circular. **J. T. WILSON,**
1BC18t MORTONSVILLE, KY.

1868. 1884.

HEDDON'S COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. Time, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC Cass County, MICH.

BEE-KEEPERS' SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay 32c. per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS.

The present prices are as follows:

White Clover, $15 00 per bushel, $4.00 per peck, or 30 cts. per pound.

Alsike Clover, $12 00 per bushel, $3.25 per peck, or 25 cts. per pound.

Sweet Clover, $10.00 per bushel, $2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE

For Brood Frames.

One ounce spools, each, - 4 cents. Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents. Postage, 13 cents extra.

One pound spools, each, 40 cents. Postage 18 cents extra.

One pound will wire about 175 frames.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,

923 West Madison Street,

CHICAGO, - - ILLINOIS.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

STANLEY'S AUTOMATIC

HONEY EXTRACTOR.

Reverses the combs without the aid of the hands; the reverse motion of the crank is all that is required. No time is lost, as we provide every machine with a brake to stop the motion, and the combs are half reversed when the motion stops. Can be used for 2 or 4 combs, as desired. No chance for combs to fall or get injured. The Comb Baskets always stop in the most convenient position for removing or putting in combs. We use XXXX Tin or Galvanized Iron for Cans. The Cylinder of Can is all in one piece. We challenge any Extractor, taking any number of combs, to do one-half the work of our 4-frame Machine. Prices reasonable.

☞ We want to employ good live Agents everywhere. Address,

G. W. STANLEY & BRO,
14A1t WYOMING, N. Y.

FOR SALE!

Alsike Clover Seed—Early Ohio, Clark's No. 1, and Hall's Early Peachblow Potatoes, Comb Foundation and Bees. Beeswax wanted. Address, **E. S. HILDEMANN,**
14D3t ASHIPPUN, Dodge County, WIS.

COMB FOUNDATION MILLS.

The "Best" and "Cheapest" in the market. Send for Sample and Price List free.
PAUL SPOEHKE, Fond du Lac, Wis.
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I. X. L. **Extractors,** $7 to $10. Cold Blast Smokers, mail free, $1.00. Plymouth Rock Eggs, $1.50 per sitting. Circular free. **W. C. R. KEMP,**
14D3t ORLEANS, IND.

E. T. LEWIS & CO., Toledo, O.,

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All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14A1

SWEET CLOVER SEED $9 per 60 lbs.; delivered at depot in good shipping order by MOSES BAILEY, Winterset, Madison Co. Iowa.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A6m

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I wish to sell 50 to 80 colonies of Bee's cheap, or will lease to a good man on shares. Can be shipped by river, rail, or express from Henderson, Ky. I must dispose of them, as I am not able to attend to them. I will give a bargain for the whole lot. My bees are all blacks, in movable frame hives.
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14A1t.

Syrian & Italian Queens

Syrian Queens bred from Queens imported from Mount Lebanon. Italians bred from best imported and selected home-bred. Tested Queens of either race before June, $3.00 each; in June, $2.50; after June, $2.00. Untested before June, single Queen, $1.25; 6 or more, $1.00 each; after June, single Queen, $1.00; 6 for $5.50; 12 for $10.00, or "Cook's Manual of the Apiary," cloth only 90 cents with order for Queens.

I. R. GOOD,
14Dtf 4B3t SPARTA, TENN.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

ESTABLISHED IN 1861.

Chicago, Ill., April 9, 1884.

VOL. XX. No. 15.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1.**

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

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☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

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A line of this type will contain *about* **8** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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☞ We have a few photographs (cabinet size) just taken, of the Rev. L. L. Langstroth, which we can send to those desiring them, for 50 cts. each postage prepaid.

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00..	
and Cook's Manual, last edition (in cloth)	3 25..	3 00
Cook's Manual, (in paper covers)...	3 00..	2 50
Bees and Honey (T.G. Newman) cloth	2 75..	2 50
Bees and Honey (paper covers)......	2 50..	2 25
Binder for Weekly Bee Journal. ...	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work....	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
Alley's Queen Rearing........	3 00..	2 75
Scribner's Lumber and Log Book....	2 35..	2 25
Fisher's Grain Tables..................	2 40..	2 25
Moore's Universal Assistant.........	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees..........................	2 75..	2 50
King's Text Book......................	3 00.	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J. King).	3 00..	2 75
Bee-Keepers' Guide (A.G. Hill)......	2 50..	2 35
Kansas Bee-Keeper........	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
New Eng. Apiarian, (W.W. Merrill)..	2 75..	2 50
British Bee Journal..................	3 75..	3 50
The 8 above-named papers.......	9 00..	7 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

◆

☞ The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers convention. All are earnestly invited to attend. A. A. FRADENBURG.

◆

☞ The Northern Ohio Bee-Keepers' Association will hold its annual meeting in the City Council Chamber at Norwalk, O., April 24, 1884, commencing at 10 a. m. A full attendance is requested. S. F. NEWMAN, *Sec.*

Advertisements.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.

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Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

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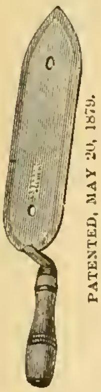
UNCAPPING KNIFE.



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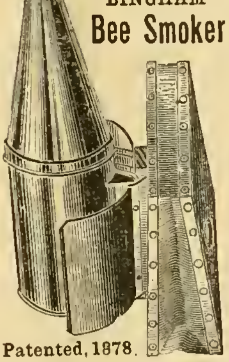
The Original
BINGHAM
Bee Smoker



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Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

BOOKS!

Sent by mail, on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

Dzierzon's Rational Bee-Keeping.—A Translation of the Masterpiece of that most celebrated German authority, by H. Dieck and S. Stutterd, and edited, with notes, by Charles N. Abbott, *Ex-editor of the "British Bee Journal."* Dr. Dzierzon is one of the greatest living authorities on Bee Culture. To him and the Baron of Berlepsch we are indebted for much that is known of scientific bee culture. Concerning this book, Prof. Cook says: "As the work of one of the great masters, the Langstroth of Germany, it can but find a warm welcome on this side of the Atlantic." Mr. A. I. Root says of it: "Old father Dzierzon....has probably made greater strides in scientific apiculture than any one man...For real scientific value, it would well repay any bee-keeper whose attention is at all inclined to scientific research, to purchase a copy. Cloth, **$2.**

Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. **Price, $1.00**

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means can afford to do without. Cloth, **$1.25**; paper cover, **$1.**

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.,** postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition. **5c.**; per dozen, **40c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. This is a chapter from "Bees and Honey." Price, **10c.**

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, **5c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

Scribner's Lumber and Log Book.—Most complete book of its kind published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States & Canada. Price **35 c.** postpaid.

Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. **40** cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, **$2.50.**

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information Price **25c.** for either the English or German editions.

Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25**; paper, **$1.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.25; for 200 colonies, $1.50.

Deutsche Buecher,

Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Zuſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchreiben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellung über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfeet, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſz der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., APRIL 9, 1884. No. 15.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

☞ We have received a Postal Card dated at Bristol, O., and post-marked at North Bristol, O., without signature. If this meets the eye of the writer, perhaps he will be kind enough to give us that very important part of any letter—the name and correct address of the writer. We have quite a number of letters, some containing money for books and subscription, without names or addresses of the persons sending. Such careless work is very annoying, and prevents any reply. as well as tbe filling of the orders.

An Early Bee Plant.

A writer in a cotemporary journal mentions *Draba verna*, or Whitlow grass, as one of the earliest honey flowers. "It is the most diminutive plant of the Mustard family, *Cruciferæ*, the first flower to delight the industrious honey bee, and his homely face, no doubt, rubs against its minute white petals with particular pleasure, as he steals from it both honey and pollen, as the earliest fruits from the first harvest. So slender is the scape with its bractless raceme, that the bee has to lie on its back while working upon it, as I have often witnessed. The instant he touches a flower it yields to his weight, and the fragile scape will bend over until the bee's back rests upon the ground, and in this position he remains until each expanded flower of the raceme has been visited and enjoyed. The *Draba* delights in sandy soil, and springs up in the corn fields after the last working, and quickly covers the ground. It is wonderful how they stand the intense cold, germinate. grow and expand flowers during freezing weather, especially as they are very juicy plants."

The Convention at Davenport, Iowa.

The very large quantity of matter on hand, awaiting a chance to appear in the BEE JOURNAL, compelled us to omit President I. V. McCagg's address, when publishing the report of of the above named Convention. As it is now taken from its connection it is not of as much interest. We will, however, give the following as a brief synopsis of it:

In my first annual report, I shall endeavor to give you a short sketch of the past, desiring you, at this meeting, to adopt some new measures, by which we may meet more frequently to discuss the science of bee-culture.

Any one, 50 years ago, who would have foretold the progress and advancement of this country, would have been deemed a fit subject for the Insane Asylum. Eight years ago, when I commenced keeping bees, those already engaged in the business were simply amateurs, not adepts in bee-keeping. They had a few colonies and a way of their own for managing them; yet thirsting for knowledge, in order to become more successful.

One year ago, believing that much good would result from an association of this kind, I took the liberty of calling a meeting. After repeated calls, 32 bee-keepers responded, and we formed this association. Our first meeting, held in Davenport, Iowa, was well attended, and much enthusiasm manifested. Since then, quite a number of the members have passed many enjoyable hours at private gatherings, basket picnics, etc.

I now urge you to fix a time in the spring, and one in the fall, at which times we shall meet and discuss the best methods of preparing bees for wintering. It is, also my desire to have the members of this association try to become better acquainted with each other. This can be accomplished, only by frequent gatherings or reunions.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

J. I. Parent, Charlton, N. Y.—4 pages—Bees and Apiarian Supplies.

T. S. Hall, Kirby's Creek, Ala.—24 pages—Bees, Queens, and Apiarian Supplies.

J. W. Clark, Moniteau, Mo.—8 pages—Combination Crate, Honey-Board, Section Rack, and Bee-Keepers' Supplies.

Adin A. Smith, St. Johnsville, N. Y.—1 page—Hives.

J. M. Young, Three Groves, Neb.—6 pages—Bees, Queens, and Apiarian Supplies.

Geo. H. Knickerbocker, Pine Plains, N. Y.—20 pages—Bees, Queens, and Bee-Keepers' Supplies.

B. F. Carroll, Dresden, Texas—4 pages—Cyprian Bees.

G. W. Stanley & Bro., Wyoming, N. Y.—4 pages—Automatic Honey Extractor, and Smoker.

Wm. Connelly, Ogden, Iowa—4 pages—Poultry.

Lucio Paglia, Castel S. Pietro dell Emilia, Italy—Bees and Apiarian Supplies.

☞ It will probably be welcome news to Canadians to learn that E. L. Goold & Co., Brantford, Ont., keep a stock of Binders for the BEE JOURNAL, on hand, which can be sent by mail to those who wish them. They cannot be sent by mail across the lines from the United States.

☞ Scores of articles are in the drawers of our desk, waiting for a chance to appear in the BEE JOURNAL, and our friends will have to exercise patience. We have "condensed" quite a number, cutting them down so much as to leave only a small portion of what was orginally written. We have decided to do this rather than keep them waiting any longer. We have confined the editorial matter to one page for several weeks, in order to give place to those who want to have their articles appear.

☞ Now is the time to plant young basswood trees, for future pasturage for your bees. You may see them advertised in this paper.

CORRESPONDENCE

For the American Bee Journal.

Priority of Location.

JAMES HEDDON.

As this heading and other phrases used by Bro. Pond, on page 149, have previously been used by me only, I rightfully infer that his article refers to me. I would be far from charging Bro. Pond with "selfishness" as the basis of his widely differing opinion, though unlike myself, he would hardly be able to clear the charge as I can; because, if I am rightfully informed, he is only an amateur, attaching a little apiculture to a great deal of writing and law practice. Laying aside the self-interest in the matter, Bro. Pond's position is not the best from which to form a correct judgment in the matter under discussion, which is one of great interest to the near future.

Now, to Bro. Pond's arguments. It seems to me he will have a hard time to make the readers see that his Mr. No. 1 is more selfish than No. 2. You seldom find an enterprising man, rich or poor, that is less selfish than to say, "I will do what I can to monopolize this business." Is a desire on the part of the poor No. 1 to monopolize the use of the surrounding flowers, that, prior to his genius to make them pay, have lain a dead waste for ages, more selfish than the actual monopolizing of all the soil they grow upon, for all purposes, for "him and his heirs forever?"

Is it entirely unselfish for the one who already has so much of this world's goods that in consequence thereof *some one must* be poor and needy, to hang around until he borrows, or thinks he has, from the skill of the poor man, and then starts a greedy and destructive opposition? But this avaricious No. 2 will fail. He has no better natural or legal chances than his poorer fellow worm. No, not as good, as his mind will necessarily mainly cling to his greater financial problems. The case is worse, however, where both parties are poor, and where the failure scrimps the poor wife and little ones.

Has it never struck Bro. Pond that the price of honey must necessarily be a figure intermediate between maximum and minimum cost of production? That he who produces a maximum cost must fail. That only those who produce at a lesser cost can succeed? That where two apiarists each ask for a share of one field, they must produce at maximum cost. The actions of the Hetheringtons, Oatmans, Grimms, etc., prove this to be true. Has he never been able, from his position, to look at the apiculture of the near future as a business with the same dignity, and surrounded with environments, the same as other lines of business?

Does he not know that the figures he gives are not average yields, and, consequently, figures of exaggeration? That in this exaggeration he has admitted the weakness of his case? Recent reports from some of our more practical producers tend to show that our bees go over six miles in each direction for nectar. We all know very well that the little workers do a good business when traveling four miles from the hive to the flowers. As above quoted, our ablest apiarists agree that we can readily practically overstock a location. An area of eight miles diameter would contain over 20,000 acres of land.

As Bro. Pond's No. 2 gentleman has hardly succeeded in honestly, and unselfishly earning more than a one-hundredth part of that area, and should he embark in bee-keeping, more than nine-tenths of his honey must come from flowers he does not "own," will he have the cheek to talk to No. 1 about the ownership of nectar? Would it not have been better if Bro. Pond had not mentioned the word "own," and does not the nectar, in a legal and moral sense, class with the air and sunshine, free to all?

As there are so many unoccupied fields where the nectar is never gathered, and as the second half of that number of colonies that one area will support, can be managed in the same field with less than one-half the expense, they can be equally well handled in another, does not the "prior" occupant of a field have the "moral right" to that field? I still think, YES.

Bro. Pond cites us to the gush "across the water." Let us see, there are two distinct classes. Past generations have so arranged it there that those who work most have least, and those who work least have most. The one class consumes the earnings of the other. The consuming class are the ones who are most interested in educating the producers how to produce more. Our own country is not entirely exempt from this condition of affairs; in which respect it is growing no better from day to day.

The dabbler who takes one loaf of "bread out of the specialist's mouth," will take two out of his own; but this does not pay either party. The "Gusher" who urges on this dabbling, is the one who fills his sack. Every apicultural teacher shirks his most solemn duty, if he fails to teach his pupils these great truths. If he does teach them, the more such-taught apiarists he sends into the field, the better for the pursuers of honey-producing. Bro. Pond asks: "Who has given us our improvements—the specialists or professional amateurs?" I answer, both. I would be glad to-day if I had such a professional amateur in my field with his 5 or 10 colonies. He could show me some entomological truths, while I showed him what are the necessary methods and fixtures to make the production of honey a successful speciality. The greatest blight on the fair fruit of apicultural literature has been the presumptuous writings of professional amateurs. Specialists (since there have been any) have done nearly all that has been done in devising practical methods of operation and procedure, as well as improving and adapting the fixtures invented by professionals to the wholesale honey-production of to-day.

By the way, is the rich Mr. No 2 about to become a professionalist? Does the large yield, taken by No. 1, excite his unselfishness to spend his time devising improvements for the poor and needy of the following generations? Why should we not expect good implements and methods of operation as the outgrowth of the brain of him who is trying to pile up the largest number of tons of honey, with the least cost and friction. "Necessity is the mother of invention." And would it be strange, if what is most needed by the specialist should be invented by him? Does nothing good and wise ever evolve from the brain of him whom circumstances have forced to mingle his physical labor with his thoughts? Have not most of the best thoughts given to the world come from this source? Is not Bro. Pond a little too aristocratically inclined?

About three years ago, an honest, world-beaten young man, one who looked as though he might have been an orphan at a tender age, came nearly a hundred miles to see and talk with me. He said he was poor; never had been helped by any person (no doubt he had the reverse), and all he then had was about 30 colonies of bees, and his health and strength, without skill with which to support a good wife and two young children. He asked me to advise him regarding the probabilities of his sinking or floating on his apiarian plank. I looked at him, watched his step and manner of speech, and made up my mind that with a little help at the start, and good advice, he could win. I have tried to give him both. He is succeeding, I believe. Now, reader, you know that this man loves his family as well as you do. I well remember when I was anxious; when it was win with bees or go hungry, and no one to shed one feeble ray of light.

You know that our pursuit is not all gold; that many fail; that another bee-keeper in this man's field would more than likely cause failure. How do you feel when one of these "gushers," from the most selfish motives, or blind ignorance, steps up to the neighbor of this young man and says, "Why don't you keep bees?" "There is lots of money in it." "Why, bees work for nothing, and board themselves." Do you not feel like saying to this class just what they used to say to me, "Put him out?"

Dowagiac, Mich., March 24, 1884.

For the American Bee Journal.

Experiments with Bees.

G. L. PRAY.

During the past six years I have been experimenting with five different strains of bees. They were the light-colored Italians; the imported Italians; the German or black bees, and a cross between the German brown bee and the imported Italians. I tried them both separately, and side by side; and for both extracted and comb honey. I prefer the cross. I have five reasons for my preference, viz.:

1. When I put on the sections, I know I shall find the bees at work there the next time I look at them.

2. They are not half so apt to swarm until after storing a fair crop of surplus honey.

3. When I take off the sections, they are always capped over, if there has been any reasonable flow of honey.

4. They make whiter combs than the pure Italians.

5. They are better honey gatherers; at least, to me, they have proven so. In every respect they are just as easy to manage as any race of bees.

My best colony of bees, this season, was from a Heddon queen; she was from the cross to which I have already referred. I introduced her into a fair-sized colony of blacks, and set them by the side of my best dark Italians, and worked them for comb honey.

When I took off the sections at the close of the season, I had 40 pounds more of comb honey from her colony than from the dark ones. I also reared two nice queens besides; and then had 2 strong colonies in good condition for wintering, besides the old one which had the body of the hive full of capped honey, on which to winter. The hive, in size, is the same as the 8-frame Langstroth.

Bees have done very well, considering the shortness of the season. I averaged about 100 pounds of comb honey to the colony; and one more than doubled from spring count. All went into winter quarters with the hives full of comb honey, well capped.

Petoskey, Mich.

For the American Bee Journal.

Bees and Honey in Kentucky.

DR. N. P. ALLEN.

The Kentucky State Bee-Keepers' Association, at their last Convention, appointed a committee to collect information in reference to Kentucky as a honey-producing State. Two kinds of circulars were printed, and sent to some 300 or 400 bee-keepers of the State. One circular requesting a statistical report of the crop of honey, etc., for 1883; and one, asking for a sketch of the different counties, as to their adaptability as an apicultural field. While 99 bee-keepers responded to the call for statistical reports of their bees and honey, last season, only a few sketches were received. The 99 reported 3,603 colonies of bees (including swarms;) and 57,108 pounds of comb honey, which sold at an average of 17½ cents per pound, and 130,302 pounds of extracted honey, which sold at an average of 12⅔ cents per ponnd. The total number of pounds of honey were 187,400; which sold at an average of 15 cents per pound; making $28,110.

We find the average per colony 51¾ pounds; making returns of $7.76¼ per colony. At least ⅓ of the colonies reported were new ones, and the greater part of them furnished no honey. There were over 100 reported as used for queen-rearing, which furnished no honey, and a number of colonies of black bees in box hives were reported as having but little honey. We find that Italian bees in movable frame hives give a much larger average.

One bee-keeper reported an average of over 300 pounds to the colony, and four others with 370 colonies, report an average of 110 pounds per colony, bringing an average of $16.30 per colony. Thus showing the advantage of Italian bees and movable-frame hives, with the liberal use of comb foundation and the honey extractor. The committee contemplate publishing a pamphlet setting forth the advantages of Kentucky as a honey-producing State. We would be glad if all bee-keepers in the State would report, giving a sketch of their counties as to the advantages for honey production.

We also find that nearly all have Italians and hybrids, and Langstroth hives; and that white clover is the great honey-producing plant, furnishing more honey than all others combined. We do not make this as a full report; but hope yet to hear from many more.

Smith's Grove, Ky.

For the American Bee Journal.

Statistics of the Honey Crop.

D. S. M'KINSTRY.

As Dr. C. C. Miller asked for expressions on this subject, I take this opportunity to give my opinion. He remarks that the plan for each bee-keeper to report to their vice-presidents is a good one, if they can secure the report; but bee-keepers will not report, excepting about one in twenty, who are interested in gathering statistics. Nearly all of the plans suggested are made after the idea of individual reports every fall, which plan, I think, has been tried long enough to prove its failure. I think the only practical way to do it is by the plan the Department of Agriculture pursues in gathering agricultural statistics.

1. Have the assessors gather the statistics of the preceding year, each spring, and report them to the Department of Agriculture, as they do at present in the State of Illinois

2. Appoint from one to four crop correspondents in each county to report, first, about the middle of May, how the bees have wintered, and give the prospects for the honey crop; and, secondly, about the last of September, report the results of the season as compared to an average; stating it in percentage, that is: if there is 10 per cent. more honey than an average, report 110 per cent.; if 10 per cent. less, report 90 per cent.

In this State we have nearly all we can desire in complete statistics as to the honey crop, excepting to get it in time for use in disposing of the crop, which can be done by the correspondents reporting the state of the crop in the fall, as stated above; and if we cannot get the correspondents to make accurate reports, whose duty it is, you surely cannot expect bee-keepers in general to make reports, especially where they point out a failure of the one reporting.

This plan, I am sure, will work in this State, and I think in any State where they take agricultural statistics. For further information on State statistics, I refer to Mr. S. B. Atwater's article on page 57. I should not try to get statistics of so many things, as we have in the past. Methods of increase, how wintered, kind of hives, etc., although interesting in themselves, should be left out of statistics. What we want to know is the number of colonies and the amount of honey produced. The plan of giving papers to the assessors to fill out, will do but little good, unless they are compelled by law to see that they are filled. The assessors in Illinois have these two blanks to fill, in relation to bee-keeping: 1. Number of colonies on hand; 2. Amount in pounds, of the honey crop of the preceding year.

If we could have this added to the assessor's blanks in all of the States, where they take agricultural statistics, and laws were passed in such other States as do not, by the aid of correspondents we might have our object accomplished. What objection is there to this plan, Dr. Miller?

Grant Park, Ill.

For the American Bee Journal.

Adulteration.

E. A. THOMAS, D. D. S.

"What is the world coming to?" is a frequent expression, and when I think of the increasing adulteration of food, sugars, etc., I feel like droping my hands and saying, "I don't know."

Adulteration seems to be on the increase, and that to an alarming extent. I was told by two heavy wholesale dealers that their sales of oleomargarine had more than doubled during the past year, and the amount of their sales was simply astounding. It has come to be a question whether a man can sit down to a table in our large cities and be sure of what he is eating. A wholesale grocer in Philadelphia told me that he sold spurious butter to some of the best retail dealers, and sold it as such.

It is almost an impossibility to get any good old-fashioned West India molasses now, so extensively is it adulterated with glucose. Why, I have just heard of a farmer in Vermont who has just bought seven barrels of white sugar, the latter being very cheap, to mix with his maple syrup. Another farmer I know of, mixed so much glucose with his syrup that there was no maple taste left.

The adulteration of honey has been so fully discoursed upon that I will say nothing upon that point, further than to remind the reader of its magnitude, and the necessity for continued and united efforts for its suppression.

The point I wish to call attention to, is the manufactnre of fancy syrups.

The reader may wonder how this can concern the bee-keeper. Let us see how it does. The fancy syrups which are now put on the market, look nice, and compare favorably with honey in this respect. And as they can be sold for a low price, they prevent the sale of enormous quantities of extracted honey. I am satisfied that were it not for the abominable adulteration of these syrups with glucose, the sale of extracted honey would increase to such an extent that the whole resource of the country would be taxed to supply the market.

Now the question arises, what shall we do to suppress this growing evil? The first thing to do, is to educate the people to an appreciation of a pure article. It is their ignorance and desire to get one hundred and fifty cents for a dollar, that makes the adulterator's work easy, and builds him up a trade that is as large as it is illegitimate. This question suggests another. How can we educate the people? I know of no better way than for bee-keepers to write short articles for their county papers, and for city papers, showing up the frauds that are being practiced to such an alarming extent. Do not confine your writings to the honey question, but search out and expose every fraud. Remember the object is to excite the indignation of the people; that done, they will act as their own detectives, and search out the genuine, and only be satisfied when they find it.

When this re-action comes, the bee-keeper can push his pure extracted honey to the front, and it will take the place of the gold-drop, and silver-drop, and diamond-drop, and all other "drop" syrups, and advance the health of the people, and the interests of bee-culture. Let us all go to work, then, and see what we can accomplish during the present year.

Colerain, Mass.

For the American Bee Journal.

Wax Comb Guides.

FAYETTE LEE.

To produce extracted honey, use wax guides, the same as Mr. Doolittle recommends. I have always used such guides; and, last year, nothing else. In ten days from the time the colony began to work, the hive was full of comb as straight as a board. I have not a crooked comb in my apiary of over 60 colonies. One and one-half pounds of wax will make guides for 10 colonies. I do not want comb foundation in the brood-chamber. To keep out the drone comb, divide your bees, and give the old queen the old stand and one brood comb, and you will get nice worker comb.

To produce comb honey, use comb foundation to fill the sections, to make the bees build comb all of one thickness; and to get them to build in all at the same time. When the honey is ripe, they will cap it; but they will come just as close to the next comb, if it is 1 or 4 inches over.

I want to produce some comb honey this year; and I shall use boxes 6x6½ in wide frames, two boxes in a frame, in a half story on top of the brood-chambers. I shall try to have all the boxes sealed over, even if I do not get quite as much honey as though they were not. Let us test the comb foundation and wax guides, side by side, and see which is the cheapest. If we use comb foundation, we want pure wax regardless of its cost. I once used some foundation, and, owing to adulteration, the bees would not touch it. Death to adulteration in every form, is my principle.

Cokato, Minn.

For the American Bee Journal.

Call Things by their Right Names.

F. A. MALTBY.

I see an article from Mr. Wm. F. Clarke, on page 9, criticising the vocabulary of bee-keeping words and phrases given by the editor of the BEE JOURNAL in No. 48; in which he made some errors. In the first place:

Apiary.—"A place where bees are kept." That is true, just as much as a tract of land laid out for farming purposes is a farm; whether the owner's stock or tools are there or not. A man may have an apiary a mile from home without a single article of apiarian supplies there; yet it is an apiary.

Bee Moth.—"A miller which preys upon the combs." "The bee-moth is an insect whose larvæ prey upon the combs." There both are at fault. They are perfect in two states. While the miller, or what would naturally be called insect, does no harm about the hive, of itself; yet it lays an egg that develops into a worm that does much harm. So that the first definition would convey erroneous meaning.

Manipulation.—"The handling of bees." In criticising this, he stubbed his toe badly. Finding such a word as this, under the head of "things pertaining to bees," is sufficient without "lugging" another long syllable and adding to the five already there. No one would ever suppose it had any reference to handling a horse or shovel. He is also in the same "fix" with "robbing." If it had occurred under the reports of the penitentiary, it would not express the idea of robbing by bees; but under the head he proposes to place it, its definition as given in No. 48, is sufficient. The shortest and most concise meaning that can be given, is best to avoid all repetitions possible.

Prof. John Phin made another error of the same stamp as the above in No. 51; when he tried to take "strong exceptions" to the definition of "worker eggs." To say "drone eggs" or "worker eggs" are the only ways that the two sexes in the egg can be expressed. It does not express what kind of an insect lays them. It may be the ant, or some other insect. If the *kind* of eggs are inquired after, we must say they are "bee's eggs," the same as we say "hen's eggs," and that gives an idea who or what produced them. But "egg workers" does not convey an idea of anything. If we speak of "coral workers" or "ivory workers," there is an idea of something being done to those things; but as eggs are not wrought or worked, generally, that expression would be senseless.

Bethlehem, Conn.

For the American Bee Journal.

Overstocking the Location.

E. J. SCOFIELD.

In my opinion, it is not to the interest of the man who is making the production of honey his occupation and support, to encourage others to engage in apiculture, and settle down by his side, thus dividing the field. A majority of such will prove a detriment, by producing a few pounds of honey, taking it to market, and selling it for whatever is offered, thereby ruining the market for the specialist. Where is the merchant or tradesman who would instruct and encourage another of his craft, to come and locate under his nose, to share the field and divide the profits with him?

Mr. Pond, in his article on page 149, alludes to No. 1 as owning a few square rods of land, and No. 2 owning all the surrounding territory. What honey is taken by the bees of No. 1 from the territory of No. 2, certainly leaves No. 2 none the worse off, for if it was not thus gathered by the bees, it would go to waste, or, in other words, "waste its sweetness on the desert air." Moreover, No. 2 owning so much territory, should devote his time and attention to farming and stock-raising, and buy his honey of No. 1; and No. 1, in turn, should buy his bread and meat of No. 2, and thus each get along better.

Any locality can be overstocked: some much easier than others, especially in poor seasons. I am always willing to aid and instruct parties *in* the fraternity, but do not want them to settle under my nose. The world is wide; there is room for all; there are many new fields, as good as the ones already occupied. Fully one-half of those who rush into bee-keeping make a complete failure of it, and leave it in disgust, poorer if not wiser.

Not over one in fifty, take them as they come, will make successful bee-keepers. If I find one, who bids fair to make a success of it, I always encourage and instruct him all I can. Mr. Pond says he is surprised to see the amount of selfishness that is shown by some. I am surprised to see the self-interest manifested by others who may be more interested in some *new* bee publication or supply trade, than the welfare of the honey-producer.

Hanover, Wis.

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*

☞ The Western Michigan bee-keepers, will hold their spring meeting at Berlin, April 24. F. S. COVEY, *Sec.*

For the American Bee Journal.

Bee Diarrhœa.

J. E. POND, JR.

Mr. H. O. Morris, on page 202 of the BEE JOURNAL, desires the experiment made of feeding a colony of bees on sugar syrup alone, and then closing it into a hive for a few days to see if diarrhœa is caused thereby. I will say to Mr. M. that the experiment has been tried, and the bees when released, would discharge the bowels as freely as when released after long confinement in the winter. Whether the cases are analogous or not, I do not pretend to say positively, but the facts are as above stated, and any one can take his choice in the matter.

My bees have all wintered well, and every colony I had in the fall is now strong and well stocked with brood. They were confined from Nov. 17 to Feb. 19 without once flying, and when they did come out, hardly a spot was seen on hives or snow. I put up 2 or 3 colonies, last fall, especially to test the pollen question. I had seen enough in past years to convince me that excess of pollen has no more to do in causing bee diarrhœa than does bacterium; but in order to fully test the matter for myself, I left a large amount of pollen in each of three hives; so much, in fact, that a considerable portion of it was consumed, but no bee diarrhœa has followed. I still think that the whole trouble is a simple inflammation of the bowels, caused by eating incongruous food, which acting as we know it does on man, promotes excessive watery secretions, which must be evacuated, and which evacuation carries off the exciting cause and thus produces a cure. I may be wrong in my opinion, but can only draw my inferences from analogy; and analogy, as a rule, amounts to probability. If I am wrong, I certainly wish to be set right; but shall require something more than mere assertions, or statements of opinions with only a guess work basis, to cause me to change my views.

Foxboro, Mass., March 27, 1884.

* * *

Read at the S. E. Michigan Convention.

Cause and Cure of Foul Brood.

DR. A. B. MASON.

The subject of foul brood is one of great interest to every bee-keeper, whether he be an amateur, keeping only a few colonies for pleasure, or a large number for the sake of the profit there may be in the pursuit. With some, it is of all absorbing interest. Many, perhaps, have passed over the articles on foul brood in the bee papers without reading them, probably feeling that the subject was of no interest to them; when, in fact, the disease was in their own apiary; in saying this, I am giving my own experience as well as that of others.

At the recent meeting of the Michigan Bee-Keepers' Association, it was stated that there was no foul brood in the region where the convention was being held, but before the close of the session, a comb with the malignant disease was shown that was taken from an apiary in the town where the convention was in session. This is not an exceptional case. Localities supposed to be free from the disease, are found to be badly infected, and those suffering from its ravages are not aware of the nature of the trouble that is keeping their colonies weak.

I was much surprised, last season, at receiving a sample of the disease from this locality (Adrian, Mich); the person sending it wishing to know if it was foul brood, and stating that it was taken from one of several box-hives from which the honey had been taken by a neighbor, and the hives and combs left exposed so that the bees from other colonies could clean up and save the waste honey.

During the season of 1879, I had charge of a neighbor's apiary, three miles from home. The bees were all in box-hives, and I transferred them to movable frames, and there was where I first saw foul brood. With as many as 150 colonies at one time, he had done well with them, but they had gradually dwindled down to 12.

I did not then know what was the trouble, and did not think of foul brood; and for several days it did not not occur to me that I was handling that which has proved such a scourge to many, and, unless checked, is bound to spread through the length and breadth of the land, and prove itself to be one of the items on the "other" (or dark) "side" of bee-keeping that Mr. Hutchinson has recently been calling our attention to. It is a disease that was known and mentioned by ancient agricultural writers. Its origin is said by some to be owing to the exposure of the brood to cold, or cold and dampness; by others, to the lack of proper food and nourishment; and that, under certain conditions, it will start from young brood whose heads have been cut off with the uncapping knife, and pulled out by the bees, and left to decay on the bottom board of the hive.

A writer on foul brood says "a poor queen may be the cause; the queen's progeny being so weak as not to have life enough to grow to maturity, but die when they are five, six or seven days old." It is said by others that none of these conditions will produce the disease.

At the Northeastern Convention, in 1881, Mr. Betsinger is reported as saying, "No honey, plenty of foul brood; plenty of honey, no foul brood." Such has not been the case with me. The season of 1882 was the best honey season I ever had, and 1883 the poorest, but foul brood was no worse with me in 1883 than in 1882.

It is said that bacteria are the real cause of the disease. If such is the case, we have a very small specimen of animal life to deal with, for it is said they are about the nine-thousandth part of an inch across, allowing about 3,000,000 of them to be in one layer on the bottom of a worker cell.

Prof. Cook, in his Manual of the Apiary, says "it is the result of fungous or vegetable growth." Not being a microscopist, I have not attempted to ascertain whether its cause is of a vegetable or animal nature, and in curing the disease, I do not care which it is.

That it is contagious, and very easily communicated by one colony (or bee) to another colony, is well known by those who have had to deal with the malignant variety. It may also be communicated by the apiarist or an infected hive or implement, or any thing that has been in contact with the infected colony.

At the Michigan State Convention a member, whose name I did not learn, was giving his experience with foul brood, and stated in effect that he thought it was produced by the chilling of the brood; for he was in a new country and the disease had never been known to be in that region, and he did not get it in buying bees or queens. I asked him if he had ever bought and used foundation. He said he had. I then asked him if he had the disease in his apiary before or after getting the foundation, and he said "after." Mr. D. A. Jones then asked me if I did not know that the heat necessary for melting wax and making it into foundation killed the disease. I said I did, but the foundation may have been handled by some one that had been handling the disease.

There are many ways in which it may be spread, and that innocently too, as regards some of those that aid in spreading it. For instance, I make my own foundation, and some for my neighbors. To make that foundation I have to buy wax. Now, suppose some one or more bee-keepers have lost their bees by foul brood, as many have. They melt the old combs and sell the wax, and are not careful about handling the wax and hives; some of the disease may be on the wax I buy. The last thing I do, perhaps, before doing up some foundation, is to handle that wax, and you can readily see what might be the result.

Some bee-keepers dread the disease so much that when they purchase a queen, they let her and the accompanying bees out of the shipping cage and destroy all the bees, letting none escape; put the queen in a new cage, and burn or disinfect the old one. Much more might be said of the different ways of spreading the malady, but it is not necessary to enumerate further.

A dwindling away of the affected colony is sometimes given as the first sign of the disease. In my experience, a colony must be very badly diseased before this occurs. In a work on foul brood by Mr. Kohnke, it is said: "Before foul brood makes its actual appearance, certain signs forestall the disease. The colony is not as industrious as others of the same size and stamp; the brood will be found not to be compact, but scattered. On examining the colony, after a few days, some cells will be found with small holes in the sealing, which will also present a sunken appearance." Such has not been my experience. The first noticable diseased condition has been a small putrid larva in the bottom of one or more cells among healthy larvæ. As the disease advances, larger larvæ become putrid and settle in the lower back corner of the cell, and still larger larvæ extend farther up on the bottom of the cells, nearly, or quite covering the bottom, and extending out on the lower side of the cells. When it first becomes putrid, the larva is of a grayish color, and becomes darker with age.

My sense of smell has not been acute enough to detect any odor when it first becomes putrid; but it soon gives quite a strong odor not unlike bad glue, and when the colony is badly diseased, the same odor may be readily noticed when standing near the closed hive. If an attempt is made to remove the putrid mass, especially the larger ones, it will adhere to the implement and to the bottom of the cell, and admit of being strung out an inch or more, and will then let go the implement and return to the cell. When the cell containing the foul mass is sealed over, the capping will often, but not always, have a sunken appearance, and may, or may not have a small hole in it. Sometimes the capping will be somewhat convex, like the capping of a drone cell, and still others cannot be distinguished from healthy cells.

There are different ways of treating the disease. I have tried only three of them, and have been successful with each. The first I tried was Mr. Muth's method, with salicylic acid. I took disinfected hives and put in frames filled with foundation, and set the hive *near* where the diseased colony stood. I then shook and brushed all the bees into, or in front of the new hive, (none of the bees should be allowed to enter any other colony). I then removed the infected hive and combs to a place where no bees could find them, till I had time to extract the foul honey, melt the combs, and boil the hive. I then fed the colony about a pint of boiled honey each day for a week. To this honey I added salicylic acid as directed by Mr. Muth. His directions are 16 grains of salicylic acid, 16 grains of borax, and an ounce of water, and put this amount in each quart of honey. I boil all infected honey before using it to feed bees. Some have reported that this method has proved a failure with them, but with myself and others in this locality, it has been a perfect success. It will more than pay any one having foul brood, to send 10 cents for Mr. C. F. Muth's "Hints to Bee-Keepers."

Another method of curing the disease, is the starvation plan, and I was as successful with this as with the acid plan. I shook the bees into a clean hive and confined them until they had consumed the honey taken in their honey-sacs, which was shown by their beginning to fall from the cluster. A more convenient way would have been to put wire cloth on the top of a hive, or box, and place it on its side, so as to be able to see when the bees fall from the cluster. I then gave them clean hives with foundation. I had 2 colonies that seemed bound not to starve. One held out for nine days, and the other for ten days, before showing any signs of giving up the struggle.

The other method I call the California-plan; and it proved to be so much more troublesome, that I tried but few colonies by it. In the evening, cage the queen; the next evening tie the queen cage to an empty frame; place it in a clean hive and shake all the bees into the same hive; leaving them so that they can fly for three days, and then shake them into a clean hive, and release the queen. I prefer Mr. Muth's plan with salicylic acid; because the bees can be at work, drawing out foundation and gathering honey, and the queen may deposit eggs.

All infected honey should be boiled before feeding to the bees; all combs melted; and all hives boiled before being used again. Washing with the acid solution, I believe, will answer the same purpose as boiling, but is more trouble for me. I have kept a bottle of the solution on hand with which to disinfect my hands, smoker, knife, etc., before going to any other colony or work, after handling a foul-broody one.

Failure has been reported from all these methods; but I believe something has been omitted, or something over-done where such failure has occurred, and here is such a case: A party trying the California method reported it a failure, but they did not follow the instructions. Instead of putting the bees in an *empty* hive, he put in "some drone combs for the bees to cluster on," and the bees put the honey taken with them, in the empty cells, and so had a good start for foul brood.

I have a few combs free from honey and pollen, taken from infected colonies last season, saved to experiment with. I shall thoroughly saturate them with the salicylic acid solution, and then use them, in colonies free from the disease, to ascertain if such combs cannot be saved.

Some parties in this county claim to have a process (a secret with them) for curing the disease and saving some of the infected combs. I have been told that they fumigated with salicylic acid, but as the disease does not seem to have left them as yet, the efficacy of the process, whatever it may be, is yet to be demonstrated.

Wagon Works, O.

For the American Bee Journal.

How My Bees are Doing.

P. F. TWITCHELL.

Saturday, March 22, was a warm spring day; perhaps the first really fine day since October, although we had some very comfortable days in the early part of December. As I had not disturbed my bees since I packed them in October, I then gave them a thorough examination.

I found some things that surprised me; for instance, the first hive that I opened contained quite a strong colony, which had apparently starved to death, with at least 8 pounds of honey in the hive; there were two others in the yard, with not a cell of honey to be seen, and the bees apparently healthy. I found an equal quantity of bees in like condition, excepting in two points; they had from 8 to 12 pounds of honey, and quite a patch of sealed brood on two frames. I might say here, that I found brood, eggs, or both, in all but two hives, excepting the two without honey, where there was *neither*. A 3-frame colony had nearly as many bees as in October, and plenty of honey, but no eggs or brood.

In preparing the hives for winter, I aim to give full colonies not less than 25 pounds of honey, and smaller ones in proportion, or a little more. I pay no attention to pollen. The honey was all gathered early, as I had no other. The bees did not make a living after basswood bloom.

I use the "Simplicity" hive, with 3 to 9 frames left in the hive according to the strength; but generally the bees were on from 6 to 7 frames, with division-boards at the sides, packed in shells, with 3-inch space all around; and the bottom packed firmly with clover chaff, and some in cushions on top, except 8 that I did not have shells for. These I set on a platform; made a bin around them, packed heavily with dry forest leaves, and covered with a shingle roof. These I found in the worst condition; 1 dead, 1 very sick, and 3 light. I prefer to have them set well up from the ground.

My bees are a mixture of Italian and German; and are very good honey-gatherers. I packed 33 colonies in the fall. On March 22, I found 1 was dead, 1 very sick, 6 light, 5 fair, and 20 in fine condition. I am well satisfied. The bees were bringing in pollen then.

Andover, O., March 24, 1884.

For the American Bee Journal.

Preparing Bees for Winter.

ROBERT CORBETT.

The first thing I did was to examine the colonies. I found them minus young brood, which I have understood to be detrimental to successful wintering. Besides this, there was more than two-thirds of the honey uncapped, which is another detriment, according to bee-ology. In the face of all this, I proceeded to weigh them; 33 colonies averaged 33 9-10 pounds; not appearing to be much lighter in the spring.

My packing process is simply this: Lay scantling on blocks about 6 inches high, and long enough to hold 12 colonies, with 4 inches space between them. Also, another row setting back to back with this row; packing well between both, also beneath. Then take three boards 4 or 5 inches wide, running between the hives, in three places, extending 6 inches; on each side of the hives, place a board 6 inches wide; at the outer edge of these, drive stakes, and on the inside set up boards wide enough to reach to the top of the hive; tacking these to the stakes. Then pack well between these and hives, and over the tops of the hives some 15 inches deep. In front of the entrances set up a board wide enough to fill the space between the ground and the packing above the entrance. This can be laid back or set up at pleasure; but during cold weather you can pack over this any thing suitable. When warm enough for bees to fly, this board can be let down, and closed again in the evening, when they are through flying.

In the spring my 24 colonies were all in good condition, except one that was queenless. I think it was queenless when put into winter quarters. During early fruit bloom my bees became very strong, and began to put honey into surplus boxes; but before late fruit bloom was over, there came a cold wave, which lasted nearly a month. The bloom was excellent, but the weather was too cold for the bees to utilize it. During the whole of that cold period the bees worked only two days, and then with so little vigor that it did not sustain the brood they were rearing.

I think I may safely say that at least one-third of the bees in this vicinity succumb during the months of May and June. During the season of 1882 I received 700 pounds of honey, which brought 25 cents per pound for comb, and 20 cents per pound for extracted honey. Besides what I have used in my family, and about 100 pounds on hand, I have cleared $515 during the last two seasons; and now I have 37 colonies on hand.

Manhattan, Kansas.

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For the American Bee Journal.

Reversible Frames.

W. H. SHIRLEY.

With some of the bee fraternity, there seems to be a great mania for reversible frames. When we have a frame all fixed, so that it will reverse when we say the word, of what advantage is it over the common Langstroth frame that will not reverse? The first thing to do is to find a man with a reversible strain of bees, to go with the reversible frame. My bees have a way of building comb with the cells a little out of the horizontal; that is, the cell pitches down a little, when the comb is held up plumb. When the combs are full of sealed brood, perhaps it might help the young bees to gnaw out, if we reverse the combs. Again, we have seen honey so thin that to reverse the frame would be sure to give the bees a job of house-cleaning.

Mr. Baldridge described a good kind of reversible frame, in *Gleanings* for March. One thing I like about his frame, is the depth, 7 inches. I had 25 hives cut to order this winter, with frames just 7 inches, inside measure. I have a great deal of faith in that size of frame for all practical purposes; but in the reversible part, I can see no advantage. I will lay it to my thick-headedness, and await developments. I have 165 colonies.

Glenwood, Mich.

For the American Bee Journal.

Union Association of Western Iowa.

The spring meeting of this Association, was held March 25, at Dexter, Iowa. The meeting was called to order by Pres. Kenyon. The roll was then called, and the Secretary's report was read; 18 names were on the roll, and 23 new ones were added; 8 of whom were ladies. 481 colonies of bees were represented in the Association.

Mr. Humphrey being called for, was subjected to a running fire of questions on many subjects.

"Laying Workers" was next discussed. One member thought there was usually but one in a colony; but this view was not accepted by others.

"Stimulative Feeding" was the next subject, but was not very warmly endorsed; those who favored it, advised caution. Adjourned until 12:45 p. m.

The afternoon session was called to order by Pres. Kenyon. The members who had been assigned special subjects, were called for.

"Size of Sections and Surplus Arrangements," by M. E. Darby; "Best Race of Bees," by W. C. Humphrey, who favored dark Italians; "Swarming, or Dividing," by E. V. Hennon. M. L. Thomson gave his method of dividing. Mr. McGrew was the only champion of "swarming." "Spring Management of Bees" was the subject of an able essay by Pres. Kenyon. "Clamp Wintering" was well handled by Thos. Chantry, who has been successful with this method.

A vote was taken on the time and place for the next meeting, resulting in the choice of Sept. 13, at Dexter, Iowa. Mr. Chantry spoke of the necessity of uniform prices for honey, and manner of marketing. A schedule was adopted. Adjourned to meet Saturday, Sept. 13, 1884.

M. E. Darby, *Sec.*

W. B. Kenyon, *Pres.*

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For the American Bee Journal.

Pollen and Bee Diarrhœa.

THOS. H. SHEPHERD.

Sixteen years of experience in bee-keeping, in Michigan, has taught me this much about bee diarrhœa. Late swarms that come after fall honey begins, always have the diarrhœa the next spring, if they live that long; but they never have it unless the winter is very open. I find that diarrhœa commences soon after fall honey begins; but, as the bees are flying every day, it is not noticed by the bee-keeper. They will have this disease in the spring, till fresh honey comes, then it will stop. Can winter be the cause? Surely not. Winter only shows us the effect from keeping the bees confined to their hives until their bodies are distended beyond endurance. They then die in large quantities on the bottom of the hives; daubing the hives and combs with their excrement, which is generally well mixed with small bits of pollen, which, no doubt, caused some to think that pollen is the cause; but I do not.

I find nearly, if not quite as much pollen in my healthy colonies as in those that die; but I find it different with the honey. Healthy colonies have their combs filled with summer honey, clover, raspberry and basswood; the sick ones have boneset, aster and a number of other kinds of fall honey; boneset being the principal part. As it comes in bloom the first in the fall, it is stored in the hive for winter use; and, in my experience, it is the principal cause of the disease.

Dr. Tinker, on page 165, says, "When bees are subject to very unfavorable conditions in winter, the temperature of the cluster, and interior of the hive, falls below the point of health; the beginning of their ills is here." Where he gets his proof, I do not know. A little further on he says: "And diarrhœa is the result, quite independent of the effect of the pollen or honey." That statement is correct. Bees that are all wintered alike, would come out alike in the spring; but they do not, in this part of Michigan. Where Dr. Tinker lives, the principal crop of honey may be clover and basswood; if it is, Dr. T. does not know much about bee-diarrhœa; and the signs that he does see, might be caused as he says.

I find, where diarrhœa does so much damage, there is an abundance of fall honey, and a famine before it commences, which leaves the bees short of winter stores, causing them to store fall honey for winter use.

Dr. Tinker believes that Mr. Heddon is far astray; but I think Dr. Tinker is yet further astray. Mr. W. M. H. Balch is nearer right, when he says, "the cause is indigestion." But indigestion is not the primary cause; there are many causes back of this. The one great cause is prostration. He makes the mistake of thinking that excitement, or nervousness, is the cause of indigestion; if it is, there is another cause for that, and that cause is in their food. I find that all my sick bees are uneasy and nervous; that is an effect, not a cause. We must get down to the first cause.

In conclusion, I would say, let every bee-keeper winter his bees on the best and earliest honey he gets; and it matters little whether wintered out, or in cellars, so long as they are protected from cold, and are in a quiet place.

Ubly, Mich.

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☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyahoga County, O. All interested are invited. J. R. Reed, *Sec.*

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☞ The Eastern Indiana Bee-Keepers' Association meets at Richmond, Ind., April 24, 1884.

C. N. Blount, *Pres.*

G. Reynolds, *Sec.*

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☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884.

Jonathan Stewart, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Unripe Honey, etc.

1. Will pure honey ferment below 40° Fahr.?

2. I had an Italian colony to leave its hive and enter another, leaving about 25 pounds of honey and brood and fresh-laid eggs. What was the cause? Does water rise to the top of unripe honey before it ferments?

G. PRIEST GRINSTEAD.
Oakland, Indian Territory.

ANSWERS.—1. Not a particle, if it is not too thin, or in a very damp place. Water does not usually rise to the top of honey before it ferments.

2. There are many cases of spring desertion, that seem to violate all rules; and which are very difficult to account for. I think internal derangement with the individual bees is the cause of such desertion.

Queens, Dampness, etc.

1. Will a colony of bees supply their own queens, or will I have to give them queens? How long will queens be good?

2. Are there a certain part of the bees who build comb, and part seal the honey?

3. What is the cause of the dampness above the frames, and the chaff cushions? A BEGINNER.

ANSWERS.—1. Your bees will supersede their own queens in proper time, cheaper and better than a beginner will be apt to do it.

2. Probably the same bees that build comb, seal the honey. How bees divide up the work among their numbers, depends much upon circumstances.

3. If your covers do not leak, the dampness comes from the respiration of the colony.

Young Bees venturing out in the cold.

1. I have one colony of bees, where, on pleasent days, the young bees will crawl out on the ground and get chilled before they get back in the hive, and, of course, stay out all night. I found them crawling around, the next day, when they got warmed up. Can I prevent them from coming out? Would it do to keep them shut in, by putting wire cloth box in front of the hive, so that they can have a flight in it?

2. In what way would you now feed sugar to bees which have no stores? Should it be made into syrup or candy, and fed fast or slow, in order to produce the best results and most honey?

3. Will it induce robbing, to feed bees candy at the entrance of the hives that are outside.

Ainger, O. C. E. BOYER.

ANSWERS.—1. I think all will come out right, if you let the bees take their own course. I would not advise imprisoning the bees.

2. I should make the food into syrup, and feed what was needed as rapidly as possible, from the top of the hive, well protected from robbers and low temperature.

3. Yes.

Wired Combs, etc.

1. What do you think of wired comb foundation?

2. What meal is the best to feed bees?

3. Is common catnip a honey-producing plant? C. W. CASTLE.
Prairie City, Ill.

ANSWERS.—1. We do not believe in wiring comb foundation. We believe in wiring the frame and then pressing the foundation upon the wires. Let us not get these two systems mixed.

2. Among those most accessible are rye and Graham flour. I do not believe in stimulating brood rearing early; especially in an early spring like this, if bees get natural pollen in ordinary season.

3. Yes; in almost all locations.

Preparing Honey for Market, etc.

1. The entrances to the Heddon hives are ½ inch deep. Is it not best to contract to ⅜ inch deep for winter, to economize heat of hive, and to prevent mice from gnawing the combs?

2. Do you advise the use of supers, for extracted honey made to hold frames only ½ the depth of the Langstroth frame?

3. What sized packages for extracted honey sell best in your home market?

4. In an article in the BEE JOURNAL, on selling honey in the home market, you spoke of furnishing the grocers with stands to hold comb and extracted honey for retailing. Please describe the stands used by you, giving best form and size, and cost of same; also, whether or not it pays to use them?

5. Have you ever seen or heard of a parasite somewhat resembling a louse, that feeds on and consumes the pollen of exposed combs during warm weather? I would like to hear from others in regard to the above.

DWIGHT FURNESS.
Furnessville, Ind.

ANSWERS.—1. A ⅜ inch entrance will not exclude mice, by any means. We object to using an entrance so narrow as to be mouse-proof. We think an open, airy entrance is the best for both summer and winter.

2. No; I think them too shallow for economy in construction and manipulation; otherwise they would be good. Nothing less than ⅔ Langstroth depth would please me, and while I am about it, I prefer to go the whole depth, and use the same style of frames above and below.

3. One and two pounds in glass.

4. The "stands" I used were reclining shelves for jars of extracted honey, with a glass case on top, and a door to open at the back, for comb honey. They pay if properly managed.

5. Yes; I have seen these little pollen eaters; and in this locality of excessive pollen, it is a good thing to have it removed sometimes.

Feeding Bees, etc.

1. Last fall I packed my hives on the inside, crowding the bees on four frames; and the other day I opened the hives and they appeared to be quite strong. As I am not quite sure about the amount of honey they have, do you think it would be advisable to lift out one of the outside frames to be sure, or, as I have some frames of honey, how would it do to lay a frame on the top of the others, under the quilt?

2. Would it do to put an enameled cloth over the frames, instead of cotton and cushions? I could then feed above the bees.

3. I use a deep hive, and have not much time to spare with my bees. Would you advise me to put a second story on top, to run for extracted honey? As I have a number of empty frames, I think I could get quite a large yield, but would like to get your opinion before I try it.

A. B. KEEPER.

ANSWERS.—Certainly; you should know if they have sufficient honey. A frame of honey laid on the frames would feed them, in this locality, after this date. Why not put it into the hive in place of an empty comb?

2. Yes; I should prefer the enameled cloth after this date. What I prefer to either is a good board cover.

3. Yes; a second, and even third story used on the tiering-up plan would save you much labor, tend to prevent swarming, and give you a surplus crop of nice honey.

Rearing Queens.

1. I do not know whether I thoroughly understand what is meant by rearing queens under the swarming impulse—will Mr. Heddon please explain it.

2. Is not the following as good a way as any to build up an apiary: Watch the few colonies one has, and when they begin to build queen-cells, preparatory to swarming, then make as many nuclei as one has queen-cells, and let these build up?

TOMMY DODD.

ANSWERS.—1. A queen reared under the swarming impulse, is one hatched from a cell that was built with the old queen present in the hive, with evident designs of swarming.

2. I would not increase in any such way, though you could do so successfully, if you did the work properly. Not one-half of the queen-cells, usually built, would please me from which to rear a first-class queen. I would not increase my stock any faster than they paid their way in surplus honey.

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

Local Convention Directory.

1884. *Time and place of Meeting.*

April 12—Texas Central, at Waco.
I. W. Grayton, Sec.

April 17.—Central Illinois, at Lincoln, Ills.
L. C. Schwerdtfegus, Sec.

April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.

April 24.—Union Ky., at Eminence, Ky.
G. W. Demaree, Sec.

April 24.—Eastern Ind., at Richmond, Ind.
M. G. Reynolds, Sec.

April 24.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

April 24.—Western Michigan, at Berlin.
F. S. Covey, Sec.

April 24, 25.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R Howard, Sec.

May 3.—Progressive, at Bedford, O.
J. R. Reed, Sec.

May 6.—Cattaraugus Co. N.Y., at Randolph, N.Y.
W. A. Shewman.

May 6.—Southern Wisconsin, at Janesville.
J. T. Pomeroy, Sec.

May 15.—Tuscarawas Co. O., at Port Washington, O.
A. A. Fradenburg.

May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Successful Wintering.

I took my bees out of the cellar yesterday; I put 99 colonies in the cellar, and I took out 96 seemingly in pretty good condition. I hope that no bee-keeper will have a greater loss than this. I consider it good wintering; I would have taken them out earlier, but the snow was drifted badly on the ground, where the bees have to stand.

J. Stewart.

Rock City, Ill., March 28, 1884.

Gathering Pollen.

Bees gathered the first pollen to-day. Last year the first pollen was gathered April 10; in 1882, April 2; in 1881, April 20. I put into winter quarters 111 colonies; have 111 still, and all seem to be lively and energetic. They have been working for a week or more on water, and from the business-like air which some of them manifest, I should not be surprised if they find something even stronger. They probably recognize the truth of the saying: "It is an ill wind which blows nobody any good," while they appropriate the hoarded treasure of their dead neighbors.

James McNeil.

Hudson, N. Y., March 29, 1884.

Bees in Utah.

Our winter has been, so far, a light one. Bees have had several flights since they were put into winter quarters, and are now rearing brood. The loss has been light. I have lost only one out of 23 colonies. I have wintered all but 4 on the summer stands; the 4 were put into the cellar. As yet, but few take any interest in bee-keeping. People are so much engaged in other business that they have not the time to devote to make it a success. The bee pasturage is here in the willow, wild flowers, plants, clover, lucerne, and other things. I was successful in raising a few Simpson plants, which the bees, for miles around, visited. I also have what we call the bachelor-button; that is a favorite of the bees all the season. Last fall I visited a station on the Utah & Nevada railroad, and I saw there some Rocky Mountain Bee Plant, but not a bee was at work on them. I am so much interested in bees that I would keep a colony of them if I did not get any returns from them.

John Dunn.

Toole City, Utah, March 5, 1884.

Too Many Bees in One Cellar.

On being informed that my bees were swarming out of the hives, in the cellar, I hastened to them. The hives were literally covered with bees, and the air in the cellar was very hot. I have wintered 193 colonies in the same room with perfect success; while it appears that 225 colonies are too many. How the bees will divide off, I cannot say. They are not on "the run," as one might suppose. I will report when all are out. The weather has been very fine during the past two weeks. The snow is off the fields, and clover is in good condition.

Ira Barber.

De Kalb Junction, N. Y., March 31.

Not Lost a Colony.

Bees appear to be wintering finely in this section of the country, and there is a good prospect of an early spring. I have not lost a colony, and they all seem to be very strong.

E. A. Thomas.

Colerain, Mass., March 31, 1884.

No Loss in Wintering.

My 19 colonies of bees wintered upon the summer stands, and came through without loss so far. One weak colony put in the cellar under my store the last of November, was put out a few days ago in good condition. I have sustained no loss as yet, and I have no fears of loss now; the worst is over. Several commenced carrying in pollen, March 23; upon examining them, I found them very strong in bees and breeding rapidly. I commenced bee-keeping about 14 years ago with one colony in an old rotten box hive, given me by my father. I knew little about bee-keeping at that time. I kept the colony some three years, without obtaining any surplus honey or increase of bees. They did not issue, to my knowledge. Finally I procured H. A. King's Text Book, and in that I learned how to transfer bees; so I made a hive after the Langstroth pattern, and in apple blossom I successfully transferred them. That season, I got about 25 pounds of comb honey and a fine swarm, which wintered (the following winter) without any special care, and came out in fine order in the spring. I have had considerable comb honey and increase, every season since, until at present I have 19 good strong colonies, mostly Italians and hybrids. The spring of 1883 found me with 14 good strong colonies, having wintered without loss, prepared on James Heddon's plan; in fact I have suffered the loss of but one colony in wintering since I kept bees, and that was on account of the entrance to the hive becoming choked with ice. The wintering problem, as it is called, gives me but little thought or trouble. I do not consider there is any trouble at all in wintering bees without loss, in this latitude, provided they can get one or two flights between the end of January and the end of March, a thing I have not known to fail since I became a bee-keeper; provided always that the bees are ordinarily cared for, and are in proper condition in the fall. Hence, with me, the wintering problem is solved.

L. G. Reed.

Kent, O., April 1, 1884.

Open-Air Wintering.

I have long believed that the open-air wintering of bees is preferable and more natural than any other method; although the details of the same may not be perfectly understood. It may be a fancy, but I think bees wintered in the open-air are more vigorous and hardy, and resist the influences which cause spring dwindling, better escaping those diseases which are sometimes contracted by long confinement. I wish those who can do so, and who have large apiaries, would make a series of observations on a few colonies, during the next five years. I have improved and applied a wire cloth portico, the use of which, when well understood, will obviate the objection that bees, when left to their "sweet will," fly too often or too much.

Francis West.

Lonsdale, Ont., April 1, 1884.

No Bee Cholera.

I put 53 colonies into winter quarters; 30 in my cellar, and 23 out on the summer stands. All are now in splendid condition, with the exception of one or two. Sometime during the last of April or first of May, when it is warm enough so that the brood will not chill, I will give the weak colonies a frame of brood. If given too early, the brood is liable to chill in the hive, because of a lack of bees to keep up the warmth. I aim to have plenty of bees by May 25, when the white clover makes its appearance. Warmth can be economized in weak colonies at this season by keeping the entrance of the hive as small as possible, and still give sufficient

room; also, by confining the bees to 4 or 5 frames by using an adjusting-board. I have had bees for 45 years, and I have never lost a colony from the so-called bee cholera. Bee cholera and spring dwindling can be prevented by a proper preparation in the fall.
THOMAS HEATON.
Moore's Hill, Ind., March 29, 1884.

Are Bees Property?

Mr. Southwick, who, on page 200 of the BEE JOURNAL, says bees are not property, has not "caught Prof. Cook" wrong this time; as he, Mr. S., is laboring under a mistake in thinking that bees are what in law are termed "*feræ naturæ*." They are not only considered in law as property, while in hives; but, if a swarm leaves my apiary and flies directly to my neighbor's yard, and I can keep in sight of them all the time, so as to be able to positively identify them, I can reclaim and hold them. This has been the law for more than 300 years, and many cases can be cited in proof of the same if it was necessary so to do. I simply correct Mr. S. in order that no wrong impressions may be given as to the status of our pets.
J. E. POND, JR.
Foxboro, Mass., March 28, 1884.

Why Eat Honey?

BRO. NEWMAN:—Sample of "Leaflet No. 1" is received. You ask: "Does it please you?" I answer, most emphatically, yes. You are always at the helm, ready to help us out; which, I hope, all enterprising bee-keepers will appreciate.
E. J. SCOFIELD.
Hanover, Wis., March 29, 1884.

White Clover Promises Well.

Bees have wintered well here, for so cold a winter. White clover promises to be a good crop. Some patent-right bee-hive men got in some of their work, in an adjoining county, about the middle of March; claiming that then was the right time to transfer, and have the bees to begin to make new comb and get ready for the honey harvest. These men knew better. The frost was not out of the ground, and not a bud had started.
ISAAC SHARP.
Waveland, Ind., March 29, 1884.

Warm Cellar for Wintering Bees.

I have kept bees during the past 20 years, for pleasure only, and not for profit; therefore, I did not take the care of them that I knew they required. Two years ago last winter, there being no cellar under the house in which I lived, I built one 14x24, and 8 feet high. I enclosed it with planks; studded the width of sills, 8 inches, and sealed up the inside, making a 10-inch space, which I filled up with sawdust. I also lathed and plastered the room, then divided it into two nearly equal rooms; one of which we used for a kitchen, the other as a store-house for vegetables, etc. In this latter room I placed my 3 strong colonies of bees in Langstroth hives; then darkened the room; raised the front end of the cap, and laid pieces of carpet over the entrance; thus making it very dark. A thermometer near, ranged from 50° to 90° the whole winter. In the spring, upon taking them out of their winter quarters, all the dead bees that I could find could have been put into a teacup. I can endorse Mr. Barber's idea of keeping bees warm. I think if those bee-keepers would study as hard how to fix a warm place for their bees as they do to find out the cause of dysentery, foul brood, spring dwindling, etc., there would be less loss in winter. Keep your bees as warm as Mr. Barber or myself, keep ours, and you save all trouble.
Forestville, N. Y. A. POPE.

Wintering Bees in Cellars.

For over 8 years, 40 of my neighbors have wintered their bees in cellars, and have not lost one-tenth part as many as those who have tried it only once, and given it up. We do not look for bee-bread; all we care for, is a good, prolific queen, and as much as 20 pounds of honey. Neither is it all capped; yet we hardly ever lose one colony out of 50, unless the queen is "played out" in the fall. For 7 years I had not lost one colony, until last year, when several colonies were lost by starvation, which was an oversight of mine. If any one should come here and say to some of those 40 men, take this chaff hive and save trouble, they would reply: "As long as Crowfoot Bros., near Hartford, keep their 1,000 colonies in cellars, we can ours." Who of those men would take Doolittle's advice about foundation being no profit in the brood-chambers. If a man can make foundation to hold 15 inches without wire, it matters not whether he uses a washwringer or press. I told Mr. Given that I could get along without wiring, after a little practice. By the use of 2½ pound foundation and one Cyprian queen, a woman extracted 350 pounds of honey from one colony during the past season. The secret is merely a quilt, not a honey board in the cellar, if put there in time.
JOHN H. GUENTHER.
Theresa, Wis.

Wintered in Langstroth Hives.

My bees are flying freely; have lots of brood, and are now in as good condition as I ever saw them; although they were wintered on the summer stands in that outrageously poor hive (?), the Langstroth!
J. E. POND, JR.
Foxboro, Mass., March 27, 1884.

Convention Notices.

☞ The Des Moines County Bee-Keepers' Association, will meet in R. C. Crawford's Hall, in Middleton, Iowa, on Tuesday, April 22, 1884, at 10 a. m. sharp. All who are interested in apiculture are invited to attend. We will have a programme on various subjects of interest to bee-keepers.
JOHN NAU, *Sec.*

☞ The Central Illinois Bee-Keepers' Association, will meet at the Court House, in Lincoln, Logan Co., Ill., on Thursday, April 17, at 2 p. m.
L. C. SCHWERDTFEGUS, *Sec.*

☞ A general meeting of the County of Oxford, Ont., Bee-Keepers' Association, will be held in Woodstock, Ont., on Saturday, April 19, commencing at 10 a. m. Important subjects will be discussed, among which will be, "Foul Brood," "Spring Management of Bees," "Best Methods of Increase," etc. M. S. SCHELL, *Sec.*
J. B. HALL, *Pres.*

☞ The Union Kentucky Bee-Keepers' Association will hold its spring meeting at Eminence, Ky., on April 24, 1884.
G. W. DEMAREE, *Sec.*

☞ A bee-keepers' association is to be organized in Western New York on Tuesday, May 6, 1884, at Randolph, Cattaraugus County. In this southern-tier district there are a large number engaged in bee-keeping, and an association of this kind has long been needed. A general invitation is extended to all interested in bee-keeping.
W. A. SHEWMAN.

☞ The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest; for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twitchell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."
C. M. CRANDALL, *Sec.*
Independence, Mo.
H. SCOVELL, *Pres.* Columbus, Kans.

☞ The Iowa Central Bee-Keepers' Association will hold its semi-annual meeting in the Court House at Winterset, Iowa, on April 18, 1884, at 10 a. m. All are cordially invited. All visitors from abroad will be hospitably cared for. Members are requested to bring their baskets well filled, and we will have a general good time. Any one having new apiarian implements, or any thing that will advance the interest of the association, are requested to bring them for exhibition. J. E. PRYOR, *Sec.*
A. J. ADKISON, *Pres.*
Maple Grove, Iowa.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

◆

☞ See M. Bailey's advertisement; he has Clover Seed for sale.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

☞ We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will be 50 cents.

◆

Advertisers' Opinion.

My advertisement in the BEE JOURNAL, has brought me over 400 responses. DR. G. L. TINKER.
New Philadelphia, O.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.
E. A. THOMAS & CO.
Coleraine, Mass., July 18, 1883.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., April 7, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & Co.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirous of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, at 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Demand for choice white comb 1 and 2 lb. sections continues good at 16@17c. Dark and irregular comb not wanted. Extracted in fair demand at 8@9c.

BEESWAX—None in this market.

JEROME TWITCHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—There is not enough doing to enable us to give much more than nominal quotations. The demand is very light, and present stocks are of small proportions. Holders are anxious to close out all offerings, before the new crop begins to arrive. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candled, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@16c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is improving a little; are selling first-class 1 lb. sections quite readily at 18c, with an occasional sale at 19c; 2 lb. is not quite so active, at 17c. Second quality is dull at 15c. Extracted not wanted.

BEESWAX—35c, but very scarce.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75.

THAT DRONE TRAP!

"Trap received. I tried it yesterday (March 27,) and caught it full of drones."
L. C. Reed, New Orleans, La.

Sample, by mail, 65c.; by express, 50c; in the flat, per dozen, including one made for Model (13 in all) $3.00. Illustrated Circular free.

HENRY ALLEY,
15A2t WENHAM, MASS.

E. T. LEWIS & CO., Toledo, O.,
MANUFACTURERS OF
All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

—THE—
VICTOR HIVE

is operated upon a new principle by which the sections are placed in vertical lines with the brood frames; continuous passages being effected in a

Practical Manner!

It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

INSTRUCTION.—The undersigned having studied Practical Bee-keeping with Mr. L. C. Root, the late Theo. Houck, and other distinguished bee-keepers, wishes to engage as special Instructor in that difficult department, Practical Bee-Keeping. Applicants of good learning preferred. ADIN A. SMITH, St. Johnsville, Mont. Co. N. Y. Box 206.
15A1t

FOR 1884, ITALIAN and CYPRIAN BEES and QUEENS, For Sale in any shape and quantity. Address,
OTTO KLEINOW, DETROIT,
15A1t 5B1t Opposite Fort Wayne, Mich.

GIVEN COMB FOUNDATION
And Choice Queens a Specialty.

Circulars and samples free. Send for them. It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.

G. H. KNICKERBOCKER,
15eow4t PINE PLAINS, N. Y.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address Stinson & Co., Portland, Maine.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Early Spring! Order Now!

To introduce my Italian Queens, I will send one of my Tested Queens, if ordered before April 20, for $2.00. Send two dollars and less, in common letters, at my risk. Address **E. P. BAKER,**
10A8t Box 342, DES MOINES, IOWA.

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t **H. C. WHITE,** MADISON, IND.

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

DOUGHERTY & McKEE,
Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

DR. FOOTE'S
HAND BOOK OF HEALTH,
Hints and Ready Recipes,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

THE BEST BEE BOOK
Price, by Mail, bound in Cloth, $1.00.

"Handy Book received. Have read it and re-read it. I must say it is the finest thing on Bees I ever saw." J. R. Bagby, LaBelle, Mo.

HENRY ALLEY,
15A2t WENHAM, MASS.

STANLEY'S AUTOMATIC
HONEY EXTRACTOR.

Reverses the combs without the aid of the hands; the reverse motion of the crank is all that is required. No time is lost, as we provide every machine with a brake to stop the motion, and the combs are half reversed when the motion stops. Can be used for 2 or 4 combs, as desired. No chance for combs to fall or get injured. The Comb Baskets always stop in the most convenient position for removing or putting in combs. We use XXXX Tin or Galvanized Iron for Cans. The Cylinder of Can is all in one piece. We challenge any Extractor, taking any number of combs, to do one-half the work of our 4-frame Machine. Prices reasonable.

☞ We want to employ good live Agents everywhere. Address,
G. W. STANLEY & BRO,
14Atf WYOMING, N. Y.

E. T. LEWIS & CO., Toledo, O.,
MANUFACTURERS OF
All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

SWEET CLOVER SEED $9 per 60 lbs.; delivered at depot in good shipping order by MOSES BAILEY, Winterset, Madison Co. Iowa.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

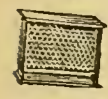
At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,
12A8t 4B4t AUGUSTA, GA.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

32ABtf J. VANDERVORT, Laceyville, Pa.

American Linden or Basswood

FOR BEES!

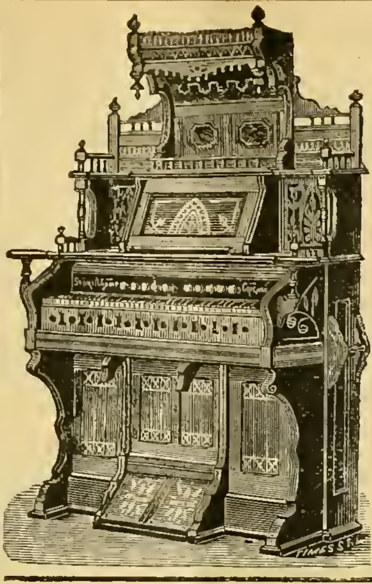
5 to 10 inches, per 100........................$1.50.
3 to 5 feet, per 100.................................. 7.00.

For sale by **Z. K. JEWETT**, SPARTA, WIS.
12A6t 4B2t

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.



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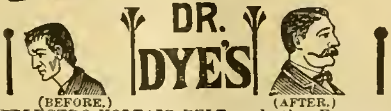

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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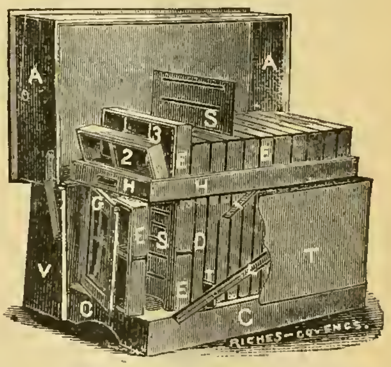

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12A8t Hartford, Wis., April 1, 1884.

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Pure Italian Bees and Queens

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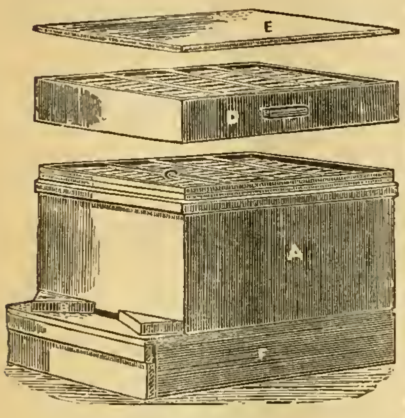

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I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

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If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

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DOWAGIAC, Cass County, MICH.

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For Brood Frames.

One ounce spools, each, - 4 cents. Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents. Postage, 13 cents extra.

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One pound will wire about 175 frames.

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On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

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It makes the finest extra thin Foundation for comb honey. For Sale by

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DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., April 16, 1884.

VOL. XX. No. 16.

THE WEEKLY EDITION OF THE AMERICAN BEE JOURNAL

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

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We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

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The Apiculturist, (Silas M. Locke) ..	3 00..	2 75
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British Bee Journal..................	3 75..	3 50
The 8 above-named papers.......	9 00..	7 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, *Sec.*
Kingston, Tex., Jan. 16, 1884.

☞ The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers association. All are earnestly invited to attend. A. A. FRADENBURG.

☞ The Northern Ohio Bee-Keepers' Association will hold its annual meeting in the City Council Chamber at Norwalk, O., April 24, 1884, commencing at 10 a. m. A full attendance is requested. S. F. NEWMAN, *Sec.*

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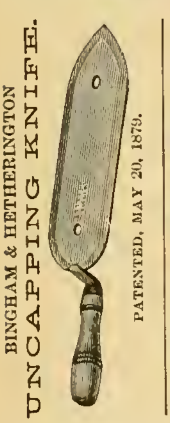
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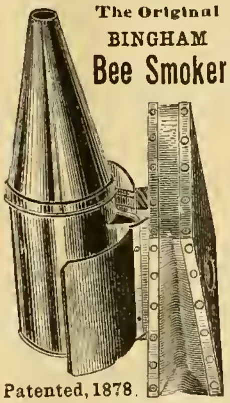

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King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

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Ueber Bienenzucht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin—Füttern—Schwärmen—Ableger—Verſetzen—Italieniſiren—Zuſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchrieben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellung über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſs der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Bee-Keeping in New Zealand.

By the New Zealand *Herald* of Feb. 26, we learn that the first convention of bee-keepers in that colony was held on Feb. 23, at Pukekohe, Auckland. The *Herald* gives the following as a report of the meeting.

It may be stated that the project has been under consideration for some time; many persons interested in bee-keeping having expressed a wish that a society might be commenced. Accordingly, a short time since, Dr. Dalziel, an enthusiast in bees, sent out a number of circulars, calling a meeting for the express purpose of starting such an association. This meeting was held last Saturday afternoon, the 23d inst., in a large hall belonging to Mr. Buchanan. Though the attendance was not very numerous, those present took up the matter with a good deal of earnestness, and seemed fully alive to the benefits which might arise by associating together with a view to promote the advance of the bee industry.

Mr. William Morgan was called upon to take the chair, and in doing so, expressed the pleasure he had in presiding over such an assembly. He called upon the convener of the meeting to explain the particular object for which they had been called together.

Dr. Dalziel stated that the object of the meeting was to commence a bee-keepers' association, of the advantages of which it was hardly necessary for him to speak. The principal advantage would be that a society of the kind would give an impulse to scientific bee-keeping, and at the same time be the means of diffusing the knowledge and information required by those who were desirous of entering upon the industry. Between the members of the association there would be, of course, an interchange of ideas, and so, by mutual communication of facts and experiences bearing upon the subject of bee-keeping, might be made, at the same time, a source of profit and pleasure.

The following resolutions were then passed: That a Bee-Keeeepers' Association be formed; that the name be the Auckland Provincial Bee-Keepers' Association; that the association be managed by an executive committee, comprising the president, vice-presidents, treasurer, secretary. and three members of the general committee; that the subscription be 5s per year; that J. C. Firth, Esq., be requested to accept the office of President; that the following officers be elected: Vice-Presidents, Captain Hamlin, M. H. R., Captain Jackson, R. M., Messrs. Proude, Bagnall and Hopkins; Treasurer, Mr. J. Collins; Secretary, Dr. Dalziel.

It was proposed that the following constitute the general committee, with power to add to their number: Messrs. Allen, Beloe, Brown, Elliott, Jamieson, Morgan, Savage, and Sproul.

☞ We have received Vol. III of the "Proceedings of the Davenport Academy of Natural Sciences." This is a volume of over 100 pages, nicely printed, illustrated, and bound, and contains a lithograph of Prof. Joseph D. Putnam, late President of the Academy, and an eminent contributor to the progress of science. His untimely death was an irreparable loss to the Academy as well as to the world of science.

☞ The first two numbers of "*The Family Circle*," now published in this country, have been received. *The Family Circle* is an attractive 16-page weekly, handsomely illustrated; full of interesting matter, and containing no advertisements. The first six numbers will be sent FREE to all who have not applied, by sending a postal card to The Family Circle, Detroit, Mich.

☞ Our readers will find the handsomely-illustrated Manual, published by the American Manufacturing Co., Waynesboro, Pa., on evaporating fruit, valuable and interesting, Sent free.

☞ We have received the Catalogue of Arthur Todd, Germantown, Pa.—4 pages—Bees and Apiarian Supplies.

☞ It will probably be welcome news to Canadians to learn that E. L. Goold & Co., Brantford, Ont., keep a stock of Binders for the BEE JOURNAL, on hand, which can be sent by mail to those who wish them. They cannot be sent by mail across the lines from the United States.

☞ In a good article on the "Spring Management of Bees," in the London, Ont., *Free Press*, Mr. W. H. Weston remarks as follows:

If April proves to be as cold this year as it was last, there is almost sure to be a serious loss of bees. The warm sun of noon tempts the industrious bees to fly out, and many are caught in the cold winds that spring up, and die. This is true in a sense of human life in spring. The only safeguard against this is to keep the hive shaded from the sun, so that its deceptive rays may not decoy the bees out into the chilling air. In a few more weeks this danger will be past.

☞ From the edition of Messrs. Geo. P. Rowell & Co's AMERICAN NEWSPAPER DIRECTORY, now in press, it appears that the newspapers and periodicals of all kinds at present issued in the United States and Canada, reach a grand total of 13,402. This is a net gain of precisely 1,600 during the last 12 months, and exhibits an increase of 5,618 over the total number published just 10 years since.

☞ We acknowledge, with thanks, the receipt of a copy of the Report of the Commissioner of Agriculture for the year 1883, sent us by Commissioner Loring.

☞ "THE WIFE OF MONTE-CRISTO," just published by T. B Peterson & Brothers, is a remarkable novel that will surely attain immense popularity, and that immediately, for never has a romance of greater interest or power been published. It teems with excitement and adventure, absolutely bristles with thrilling incidents, and has an element of mystery that vastly augments its wonderful fascination. It is a continuation of Alexander Dumas' world-renowned creation, "The Count of Monte-Cristo," and is fully worthy of being associated with that masterwork. Price, 75 cents.

CORRESPONDENCE

For the American Bee Journal

Honey-Boards and Section Boxes.

W. Z. HUTCHINSON.

Mr. A. J. Hatfield, of New Carlisle, Ind., asks the following questions, which I will answer in the BEE JOURNAL, as requested:

"At the Michigan State Convention, you mentioned using a queen-excluding honey-board, with spaces 5-32 of an inch wide. I would like to inquire whether you observed any difference in the disposition of the bees, in regard to the readiness with which they entered the sections through this small space, compared to that usually given them to pass through; and, judging from your experience, you would recommend the 5-32 of an inch space, in making queen-excluding honey-boards.

"I am thinking of changing the size of my sections, which are 4¼x4¼x2, to some size that can be used without separators; and I would like your advice in regard to what size to adopt. Dr. Tinker says that sections 4⅜x4⅜x1½, when filled, will weigh on an average, 14 ounces. Mr. B. says that 4⅞x4⅞x1½ will weigh 18 ounces. Now, would not a 4½x4½x1½, weigh about 15 ounces, and be a nice size to use?

"As others besides myself would probably like to know your opinion upon these subjects, please answer through the BEE JOURNAL."

I have used the Heddon slot or skeleton honey-board, in which the spaces are about 5-16 of an inch across; and I have used a honey-board of similar construction, in which the slots were ⅝ of an inch wide, and placed just the merest trifle less than 5-32 of an inch apart. I have also used the perforated zinc, in which the perforations are 5-32 of an inch in width. The bees do not pass quite so quickly through the wooden honey-boards with the narrow slots, as they do through the regular Heddon honey-board, or through the perforated zinc; but they pass through quickly enough to be able to carry the honey "upstairs" as fast as necessary; at least I have never noticed any difference in the amount of honey stored over a regular Heddon honey-board, one with the narrow slots, or one of the perforated zinc. Although I have crowded the brood next, until there was but little in the brood combs, except brood; yet I have never had a queen pass through the perforated zinc; although they have been reported as doing so; and, for this reason, I would have the spaces in queen-excluding boards a trifle less than 5-32 of an inch. Aside from their cheapness, I prefer the wooden boards, because they are always straight, and the spaces above and below remain equal, while the zinc is apt to sag, or become kinked or warped; thus making one of the spaces so large that comb is built in it, while the other becomes so small that the zinc is glued fast.

The majority of the fixtures, all over the land, are adapted to the use of the 4¼x4¼ sections. In fact, this size is regarded as the standard; hence, it would require a most excellent reason to induce me to change from that size. I would advise sections 4¼x4¼x1½ to be used without separators. Of course, such sections would contain but little, if any more than ¾ of a pound; and it is possible that such a section might eventually be adopted as a compromise, by both the defenders and the enemies of that innovation, the half-pound section. No sections are of such a size, nor filled in such a manner, that they can be sold for a pound each, without weighing; and it is better that a section weigh a few ounces less, than a few ounces more, than a pound.

Rogersville, Mich.

For the American Bee Journal.

That Improved Heddon Case.

C. H. DIBBERN.

I was pleased to notice Mr. Heddon's criticisms on my improvements on the so-called Heddon Case, on page 153. I do not believe that Mr. Heddon, himself, is entirely satisfied with the Case, as he makes it; as he wrote me that he had tried numerous improvements, but failed. I do not claim that my Case is perfection; but I am certain it is an improvement. In this view, Mr. Caldwell, of Cambridge, Ill., Mr. Hackman, of Peru, Ill., and others, fully agree with me. I have neither patents nor Cases to sell; and my only interest in this matter is to give bee-keepers a better method than many now have.

I do not use glass in the sides of Cases, but many prefer it. I simply described in my first article, how it could be used. The principal points of advantage in my Cases are as follows:

1. The sections set on hives in as compact a shape as possible to put them; thus saving the lumber and space of the partitions. This saving of space, on some hives, will allow of an additional tier of sections.

2. Many of us cannot dispense with separators, and this Case is admirably adapted with or without separators. I have never yet been able to produce one-pound, and larger sections of honey, to my satisfaction, without separators. I find many other bee keepers in the same boat. What we may be able to do, with half-pound, or sections 1½ inches wide, remains to be seen.

3. The Case being instantly changeable to different sized sections. For instance, it holds 5 tiers, 7 in a tier, 4¼x4¼x2 sections. It will, also, hold 7 tiers 4¼x3x1 9-16 scant, or 7 half-pound sections.

This will be found a great convenience where it is desired to produce both one, and half-pound sections; as the Cases are the same sizes, and perfectly interchangeable. Also, should the bee-keeper run out of either sized sections, during the hurry of the honey harvest, he can just fill them up with the other size, without any fixing over of cases, or vexatious waiting for sections to arrive, which may still be in the original planks.

As my tin T's lay perfectly loose in the Cases, when empty, I would take them out entirely. I fail to see Mr. Heddon's objections about getting them bent, when not in use. In regard to the T's not being strong enough, Mr. H. is certainly mistaken. If they are properly made, they are like a piece of railroad iron, surprisingly strong; and if sections fit properly, will hold them in place, preventing any warping. The bees do not stick the sections very securely to the tins. I have used Cases with partitions, for years, and know the difficulty of variations in size of sections. For instance, your Case is made for a 4¼x4¼ scant, section. The next lot of sections, perhaps, coming from a different manufacturer, are a little full, just enough so they will not go between the partitions. If there is anything more vexatious, it is when the fire in your smoker goes out, and the bees begin to feel well.

In regard to bee-space, I have always used a ⅜ space; but I have noticed that this space, by warping of boards and accumulation of propolis, never becomes any less. I have been surprised, when I thought I had a ⅜ inch space, to find, after a few years, that I actually had ½ inch, or more. It *may happen* as Mr. H. thinks, that I will discard the improvement, in a few years; but I rather guess that I will be knocking the partitions out of those made after his model.

Milan, Ill., March 17, 1884.

For the American Bee Journal.

Reversible Frames.

M. M. BALDRIDGE.

My attention has been called to an article on "Reversible Frames," on page 117 of the BEE JOURNAL, written by a bee-keeper in Kentucky, from which I quote as follows:

"The season of 1882 was a very poor one for honey; and when honey was coming in slowly, my reversible frames worked like a charm; and sure enough I had a bonanza. But the season of 1883 proved to be an extra good one for honey; and, although I could work the reversible frames like a charm, still I could see nothing gained by reversing them when they were full of brood or honey, and no room for any more. So, after a trial of reversible frames in one poor and one good season, I have decided that such frames work better in the head than in the hive. In other words, reversible frames are good in a poor season, but poor in a good season."

The above contains some food for thought. I am glad, indeed, to learn that "reversible frames are good in a poor season" for honey; but the writer fails to tell *why*. If they are *good* in *poor* honey seasons, then, perhaps, this will cover their *extra* expense, which is the only objection to them, that I know of. That they work "like a charm" at all times, is important; but *why* reversible frames in *good* honey seasons are *poor*, is not very apparent. This statement needs an explanation. I see no reason why a frame should be reversed when it is *full of brood*, and "no room for any more!" And I do not see why any one should reverse a frame when *full of honey*, and "no room for any more." Because frames are made reversible, I do not see that we must reverse them when nothing is gained by so doing. The object of making frames reversible, as I understand the matter, is to enable the bee-keeper to reverse them when *necessary*. The same is true in making the frames movable; not to compel us to lift the frames out and put them back again simply, and thus keep us busy and out of mischief, but to enable us to manipulate the combs *at will* and for a *sensible* purpose.

St. Charles, Ill.

For the American Bee Journal.

Wintering, Double-walled Hives, etc.

HIRAM RICHEY.

Mr. O. O. Poppleton, on page 56, says: "Show me a practical method of keeping the entire inside of my hives perfectly free from dampness, and I have no further fears of unsuccessful wintering." Mr. P. is correct. Mr. P. E. Van Etten has the same opinion; but gives his plan of dead-air spaces over the brood-chamber, which is not correct. The dead-air spaces should be around the entire brood-chamber, not over it.

Mr. J. A. Buchanan, on page 119, says: "This old question is not long at a time laid on the table." He gives the double-walled hive the preference. He deems it folly to remove a part of the combs, and use division-boards. I agree with him; and if bees have plenty of stores, and two strips across the frames for a passage way, there need be no fear. Another important point is ventilation. Mr. B. states that a large entrance should be used. I beg to differ. The entrance to my hive is ⅜x3 inches. I do not rely on that for ventilation. The hive I prefer has double-walls with dead-air space of ¼ inch. I have used one of these for three years, and never have seen any dampness in it. No cold air can directly strike the bees, if the entrance is covered with snow. I pay no attention to that, so long as the ventilator is clear; and then I have no fear of mice. For three years I have used this hive without loss. All that is necessary is, that the bees have plenty of stores, and keep the inside ventilators open. The first warm day in the spring, lift the brood-chamber, and sweep the bottom board clean; put down the feeder and feed every day until they can get food from other sources.

About three years ago, was a discussion about taking bees out of and into the cellar. Some thought it too much trouble. One person thought it no trouble, as he had buildings on a track, containing 36 hives each. He took the brood-chamber, leaving the hive on summer stands. This I could not understand at first; but finally hit on the plan, and made one hive; it suited me; so I remodeled all my hives; put my bees into them, and have lost none since. Previously I lost about two-thirds in each winter.

Mr. Henry Alley thinks dry sugar is the best food for bees if water be also given. I no not agree with him. Give them syrup made from granulated sugar, if you can find it unadulterated. I bought some sugar at a grocery store; boiled it, and the scum was of indigo hue; when it became cold, it was like flint. I think it poison; for, several times, I think it affected my stomach. Each barrel of this sugar contained an affidavit, and a written guarantee of its purity.

Mr. Editor, I send you a box containing the scum of the sugar referred to above. What is it?

Sing Sing, N. Y.

[The right name for the stuff is "poison," as our correspondent suggests. The adulteration of sugars is now so common that it is very difficult to obtain any pure. That sent us by Mr. Richey has, no doubt, had too strong a dose of adulteration. When put on coals of fire, it burns blue and smells very strong of sulphur.—Ed.]

For the American Bee Journal.

Does Bee-Keeping Pay?

E. W. WALES.

I have kept bees for the past 15 years; and from my limited experience, I should say that it pays with the experienced, year after year, 100 per cent.

The worst trouble with beginners is in getting started in the business; hives, implements, bees, etc., costing considerable. If a beginner who has only a few colonies, meets with loss in wintering, he is apt to become discouraged too easily. I have found it so in my experience.

After "stocking up" with a suitable number of colonies, hives, fixtures, etc., even with great loss during a severe winter, and cold spring, the hives remain, also a large amount of combs, implements, etc., with which again to commence. By purchasing bees, the hives may be again filled by the end of the season, and honey enough to net him 50 per cent. on the investment.

I never have made bee-keeping a specialty, having worked at farming in connection with it. In the fall of 1882, I put into winter quarters 38 colonies of Italian bees. Of this number I lost 21; leaving 17 with which again to build up. Of the 17, there were only 3 strong colonies, 3 fair, and 11 weak.

Here in Michigan, all know that the spring was very late and cold; but by feeding and good care, I managed to bring them safely through to fruit bloom. By fall I had increased them to 45 strong colonies, which are in winter quarters, and at this writing, apparently in good condition. The past season, my bees have produced 500 pounds of comb honey, for which I received 16 cents per pound; making $80; and 470 pounds of extracted honey, for which I received 12½ cents per pound; making $58.75; selling all of it in my home market.

Besides the honey produced, I have an increase of 28 colonies, valued at $5 each, making $140. Total gain, $278.75. My expenses were $22.50. Consequently leaving me a net gain of $256.25, from 17 colonies; and that, too, in a very bad season. I rather think it pays. In the above figures, I have omitted the value of the honey used in the family, or given away, which must have exceeded 100 pounds.

Disco. Mich.

For the American Bee Journal.

Cause of Dysentery in Bees.

THOS. H. SHEPHERD.

The cause of bee-dysentery, I think, is in the food the bee eats. Long confinement and cold show us only the effects, not the cause. My bees often show signs of dysentery in the fall, when driving them out of the sections, as early as the middle of September, while the flowers are yet in bloom. I have noticed them on warm days, late in the fall, while flying up, drop their excrement, after being confined not more than a week by cold weather. Thus showing that they have the disease at such times. Now, if this is true, the disease must result from either the honey or pollen, or both. That all honey or pollen is unlike is true. Just the particular kind that brings on the disease is what we wish to discover. To reach this, we must know when the bees begin to show signs of dysentery.

In the spring or summer, bees always eat, and feed to the brood both honey and pollen, which is gathered at that time. So, I think, it would be an easy matter to find out what it is, by the kinds of flowers out that time. Yet, there are so many kinds of honey-plants out at that time, that, perhaps, it would be difficult to determine. The disease here begins with, or after boneset is in bloom. Then the asters bloom next. In this latitude there is a famine after clover bloom, which lasts until boneset comes in bloom; thus leaving the brood-combs in shape to hold the boneset honey and pollen, which is stored for winter use, and consumed early.

There are quite a number of other plants, such as mint, golden-rod and wild sun-flowers; but boneset, asters, and fall flowers are the principal honey-producing plants in this part of Michigan; but as for which one causing dysentery, pollen or honey, I think it honey. I have found in every case, upon examination, that there were honey and pollen in the abdomen of the bee; but a larger portion of the liquid substance I believe to be honey. After all, it may be that pollen is the cause. Bees are badly diseased in this section. If bees could be wintered on clover, basswood or raspberry honey, they would not be affected with dysentery.

Ubly, Mich.

For the American Bee Journal.

Bee-Keeping in Cuba.

A. W. OSBURN.

On page 25, is a most worthy article from the pen of Samuel Simmins, on "The Coming Bee, Pure Mating, etc." While I agree with Mr. S. upon the sources that we are to look for, for the "coming bee;" yet, I am obliged to state how widely different has been my experience, in relation to the distance queens usually go, to mate. I will give one year's experience as evidence: In 1881, while in California, we had 270 colonies of bees; 27 pure Italians, 243 blacks and hybrids. I reared, that summer, 243 Italian and Syrian queens, and introduced one to every hive, that had formerly had black and hybrid queens.

About 2½ miles from our apiary, were 280 colonies of all Italian bees. Remember in our own apiary there was 243 black and hybrid colonies against 27 Italians. Now, for the mating of our queens. When, in the fall, the progeny of all the young queens were old enough to fly, I took pains to count all queens that produced bees that were not 3 banded; and just 3 queens, only, had mated with black drones; 240 producing as fine 3-banded bees as any one would wish to see. Now, is it natural to suppose that the 27 colonies of Italians produced all the drones; and that the 243 black and hybrid colonies produced none at all? I think not; if it proves anything, it proves that queens, when all conditions are favorable, that for choice, they go away from their own yard to mate.

In my opinion, the important condition to be considered, is the climate in which the bees are located. As it is conceded, by all close observers, that bees are good judges of what the weather is to be for the next few hours, with me, it is natural to suppose that "her majesty," when she wishes to go on her bridal tour, has not the slightest objection to traveling a mile or so further, if, in her judgment, there is no danger of being caught in a thunder storm, before she could return; and in no country, that I know of, could the last named conditions be more favorable than in California. For they seldom have any rain there from April to November. Whether my suppositions, as to the real cause of our queens going away from home to mate, is correct or not, the result was precisely as I have stated it.

But this is only one instance. I never have been located since then, so I had not as good an opportunity to test this question of queens mating, as I had that summer. In my last article, I made a statement, that I am forced to retract. I said: "I never expected to see honey flow in Cuba as I had seen it flow in the North, and in California." Now, I am disposed to give Cuba credit for all that is justly her due, and in doing that, I am compelled to say that, in my opinion, there is no country that can equal this for bee-keeping. I have been here a little over 3 months, and it has been one continual honey flow, and the end is not yet; for there is no "let up" to the flowers, or to the amount of honey coming in.

I assure you that when colonies store their 50 pounds of honey a week, continually, it is no mean country for bee-keeping; and that is what our strong colonies have been doing, and are still doing. But we are rearing queens and dividing now, and from this on, there will be an end to storing honey for surplus.

It is the intention to run this Home Apiary to 600, if not 1,000 colonies; and after the last three months experience, I cannot see how it is possible to exhaust the supply, even with 1,000 colonies in one yard. We are making calculations to that effect, with one 4-frame extractor on hand; and the proprietors have ordered another with capacity for 6 frames: sheets, honey-house, and evaporating tank in the same proportion; of the evaporating tanks, they have two that hold 400 gallons each. The pioneers and owners of this great enterprise, are two brothers, J. and P. Casanova, Americanized Cubans, who have amassed large fortunes by their energy and integrity; and with progressive views as broad as their wealth.

San Miguel, Cuba, Jan. 24, 1884.

For the American Bee Journal.

Sweet Clover for Stock Pasture.

C. L. GAY.

Several miles from the city of Montgomery, Ala., on what is known as the "old Tarver Plantation," we find the origin of this valuable plant in America. The seed being first imported and deposited there, these in turn producing their seed, and being borne by the wind until traces of it can be found in almost any portion of the prairie belt of Alabama. Yet, the interest which long since should have been turned to it, is just now developing itself. Our farmers are beginning to realize the fact that large advances and no cotton, in return, is unprofitable. Their attention is more directed to diversified farming, and to all farmers—prairie farmers especially—this subject of melilot is one of importance. Early in the fall this plant may be seen to be putting in its appearance for the winter, attaining to the height of several inches by January, if left unmolested. In this climate it being the only green plant to act as food for stock during our severe winters.

An enterprising farmer sees his chance for an early spring hay cutting, and preserves it; even after once being cut at its best, the remnants are sufficient to voluntarily replant the spot. Yet, to keep a good stand it should be replanted every two or three years. In fertile, or poor prairie spots, I have seen this plant reach the height of 12 feet from the top to the ground. Its branches spread in every direction from the main stem, shooting forth in the same manner as the branches of the cotton plant, tapering in pyramidal form from the tip of the lower branches to the top. At this age, or before attaining its full growth, it begins to blossom, and this is its beautiful feature, furnishing one of the most fragrant odors. This is the cause of the fondness stock have for it. At all times having a sweet odor, and imparting a fine taste.

Again, during the honey season, the busy bee seeks the cavities of its blossom, and from it extracts the sweets which impart the most delicious taste to honey. Early in the fall, the seed begins to mature, and is ready to be gathered about the first of September. One other important point: possessing only a tap root it penetrates deep into the soil, and thereby is not affected by the dryest of summers. The principal difficulty is the gathering of its seed; they being so small. Yet they are gathered faster by the so-called art of *stripping*. At this writing it is five inches high, and giving the sheep a send off. During the month of April, I will plant, and get a fine cutting of hay, or preserve it for seed. Again in August I will plant for my winter crop. At an early date I shall begin to cut the hay for another winter's supply. As a hay it ranks with the foremost, still retaining after cut, its fragrant odor. Of course it should be cut during its most tender age; between the heights of 12 and 25 inches is considered the best.

In conclusion, I will say, there is no plant that can be employed to such an advantage, and made to serve so many purposes on the farm, as melilot.

Montgomery, Ala., March 31, 1884.

For the American Bee Journal.

The Swiss Wax Extractor.

OSCAR F. BLEDSOE.

No work connected with the apiary, is more important than the rendering of wax; and, as I have had some practical experience in it, I will, for the benefit of others, give the same. With the first supplies I purchased for my apiary, I bought a Swiss Wax-Extractor; the one commonly advertised for sale. After repeated, and vexatious trials, I found that the machine did not serve its purpose perfectly, for the following reasons:

1. The comb basket is too small; and as the the interstices through which the wax flows, are also small, it becomes a very tedious process to get the wax from a large quantity of comb. It is very troublesome to empty the comb basket often; and streaks of wax may almost always be found in the refuse.

2. The receptacle in which the comb basket rests, prevents the direct ap-

plication of the heat and steam to its bottom. Hence, it takes too long to thoroughly melt the comb: and, in most cases, after the refuse is emptied, and cools, remnants of wax will be found remaining in it. The heat and steam are also dissipated through the spout, which is required to be always kept open, and between the extractor and the pan which holds boiling water. All these facts make the melting of comb in this extractor, especially if they are black and tough, slow, tedious, and imperfect. Hence, I discarded it, and resorted to various devices, including the old-time bag-process. No plan, however, suited me as being speedy, neat and perfectly effectual.

I. at last. went back to the Swiss extractor; discarded the comb basket; took out the receptacle in which it rests, and had a bottom put in the Can. I also had a rim soldered on the inside of the Can, an inch above the spout; on this I placed a circular piece of tin made strong by wire around the rim, and full of perforations. Wire cloth, as coarse as possible, provided only that the interstices are not so large that dead bees will pass through, would be better than tin. I also had a second story added to the Can, thus doubling its height and capacity. After the Can is full of comb, I pour in water till it flows from the spout. Care must be taken not to allow the water to be so high as to reach above the perforated tin, as capillary attraction will retain it, and prevent a free flow of the wax from the combs. The spout is now closed. I use a wooden stopper; but an iron faucet would be better. Heat is now applied to the Can until the steam thoroughly melts the contents. The stopper is then removed, and the wax run off into a vessel.

This plan suits me, as it cleans the combs perfectly, and any quantity of them; and twice rendering will make very clean cakes of wax. My practice is as follows: I keep my wax-extractor near my honey-extractor, and put in all the cappings. As the honey is easily run off through the spout, it serves an excellent purpose in this respect. When I get the extractor full of combs, I set it in the sun. The intense heat of the sun kills any moth or larvæ, and causes the combs to sink, and the honey to drip from the cappings. I then add more comb, and pour in water. Late in the evening I build a small fagot-fire between two sticks of wood, at my wood pile; adding a few pieces of the refuse of the comb from a previous melting, to make a hot fire. The extractor is placed over the fire. I then leave it, giving it no further attention until after supper. I then remove the stopper, and let the wax and about half the water flow into a vessel. The stopper is then replaced, and the extractor placed over a few coals to keep the contents hot, till every particle of wax drips from the combs. The next morning I remove the refuse from the extractor, by using a steel garden trowel to loosen it; and I never find any particles of wax remaining in the refuse.

I have thus been minute in describing my plan and machine, as its use has been a great convenience and comfort to me, and may benefit other bee-keepers. Any one who lives near a tin shop, can easily have one made. As wax is one of the most valuable products of the apiary, every bee-keeper should produce and save as much of it as possible.

Grenada, Miss.

For the American Bee Journal.

Bees Wasting Wax.

C. P. DADANT.

Several persons have lately spoken of bees wasting wax for want of room for building combs; and held that this proved that bees could not help producing wax in a certain amount, even if they have empty combs.

If we open the "Mysteries of Bee-Keeping," by M. Quinby, page 251, we read the following: "When constructing comb, bees are constantly wasting wax, either voluntarily or accidentally. The next morning, after a swarm is located, the scales may be found, and will continue to increase as long as they are working it; the quantity often amounts to a handful or more. It is the best test of comb making that I can give. Clean off the board, and look the next morning; you will see the scales in proportion to their progress. Some will be nearly round as at first; others more or less worked up, and a part like fine saw-dust."

The above being the report of one of the ablest, observing, and practical bee-keepers of this century, it is certainly worthy of attention. It proves that bees can, and do waste wax when they are building combs, at times, and not especially when short of room for comb building. Now for the explanation, or cause, which Quinby did not give.

Bees do not willingly waste wax, and their saving and industrious habits will convince all that something must be wrong when they thus throw away the costly wax.

The cause can be told in two words: *cool nights*. When bees harvest honey in largest quantities, the weather is often cool in the night, and very hot in the day. The wax-producing bees hang in clusters; but in a cool night those which are on the outside of the cluster feel the change of temperature, and when the scales of wax come out of the rings of their abdomen, if they are not at once taken by other bees and fastened to their place, they become too hard for easy manipulation, and are then allowed to drop to the floor.

We saw a very clear instance of this, one day, in a small swarm (about two handfuls) that had been hived late in September. On opening the hive, in which they had been given only narrow strips of foundation, we found a couple of pieces of comb, 3 or 4 inches square, a lot of wax scales, white as snow, on the bottom-board; and about 3 dozen bees upon which the wax had cooled so promptly that the little white scales were still fastened in the rings of their abdomen.

It is very probable, also, that when bees harvest honey in large quantities and have no empty combs in which to place it, such a large proportion of the bees devote themselves to wax secreting, that when this wax is produced, there are not enough other bees to take care of it as fast as it comes, and part of it is wasted.

If, on the other hand, the bees have plenty of empty combs, only a few of them will produce wax, and it will easily be cared for; the greater part of the bees depositing the honey in the cells as fast as harvested; the small amount of wax produced will be used in sealing and lengthening the short cells, or filling up deficient places.

There are, however, some other occasions in which bees will unwillingly waste wax. When the heat of the sun, or lack of ventilation in hot weather, causes one or more of the combs to melt down, the bees have to gorge themselves with the wasting honey, and nearly all the bees in the hive are forced to produce wax, so to speak; since they have no comb in which to place it, and if the hive is still inhabited, in 24 hours, on account of the damage and heat, they will deposit their wax in small lumps where-ever they may happen to be.

In 1878 we had some 20 cases of this kind, in an apiary, exposed to the 3 o'clock sun. The bees had stopped the ventilation by clustering in front of the entrance, and nearly all the combs in each of the 20, broke down. There is also a waste of wax when the hive is completely full of both comb and honey; and in such case, the waste is very easy to understand; but our many bee-keeping friends around us, all agree that they have never seen wax wasted in a hive containing plenty of empty combs.

Now for the cost of producing this wax. All large honey-producers can test this to their satisfaction, in 2 or 3 seasons. Select the best 20 colonies of your apiary; let them be of the same size, and all without drone comb. Divide them into two lots of equal force, so that by treating them alike you would stand a fair chance of having a like result from each side.

Now run 10 of them for comb honey, giving them supers with only starters enough to have straight combs; and run the other 10 for extracted honey, with all the empty combs (not foundation) they can fill; but not too many at a time.

Let each colony that swarms be discarded; also a colony of equal strength from the other side, and keep account of all the net honey harvested, clear of wood or glass. One year will not decide it, as it might be that a few changes will take place in the condition of some colonies, that would alter the result; but try it for 3 years, and tell us the result. The net cost of the wax will be the difference in the amount of the crop. Did we try this ourselves? Yes; but we will not here tell it for fear of frightening our comb-honey producers. Let them try it for themselves.

Hamilton, Ill.

For the American Bee Journal.

Those Half-Pound Sections.

W. D. WRIGHT.

Mr. W. Z. Hutchinson, on page 151, seems to be very solicitous for the welfare of the half-pound sections. He thinks they have been sadly abused, etc., etc. Well, from some cause or other, perhaps over-abuse, or perhaps from the experiences of the past season in their use, they appear to be on the decline. Bee-keepers in general, appear to be more at rest on this subject than they were last winter and spring, and I have noticed that these sections have not even been quoted in the market reports during the past fall and winter. For what reason, I know not.

I have also noticed that the columns of the different bee periodicals have not been over-crowded with reports of the success of these half-pound sections. Cannot some one come to the rescue and give us a booming report on them, financially and otherwise, insuring their success beyond all doubt? Mr. Heddon's report on half-pound sections has just come to light in the March number of the *Bee-Keepers' Magazine;* and that is not very re-assuring. He acknowledges that they have been a damage in his trade, and as far as he has used them they have also been detrimental. Probably just what "those who were frightened (?) at their advent" expected.

Like many of our commodities of the present day, I believe the demand (what little there is) for these half-pound sections, has been created by the supply. Mr. Hutchinson says: "Bee-peepers, who did not understand the principles underlying the production of comb honey, have written long articles in which they attempted to prove that not nearly so much honey could be produced by the use of small, as by the use of large sections."

On page 8, Vol. XIX of the BEE JOURNAL, Mr. F. C. Benedict gives the conclusions arrived at after three years' experience in the use of these sections. He also gives the opinions of J. C. Newman & Son., and W. S. Benedict; all of whom were pioneers in the use of half-pound sections. They claim that not nearly as much honey can be obtained by their use as with larger sections. They do not now attempt to prove it, but have proved it by past experience, and probably their experience is just as valuable as the experiences of "some of our leading comb-honey producers," as Mr. H. states. But, perhaps, these men do not "understand the principles underlying the production of comb honey," which, of course, would account for their adverse experience.

Again, Mr. H. says: "Perhaps extracted honey can be put up for sale in small packages more cheaply than the same thing can be done with comb honey." Just so; it is not a parallel case, at all, with comb honey; as extracted honey is adapted to almost unlimited division. It can be put up in penny packages if desired, or even "two for a cent," as it does not increase the labor during the busy season, and is taken from the bees in bulk. It can be put up in these small packages at any time, and that by cheap inexperienced help.

I suppose that Mr. H. will admit that there are extremes to be avoided in either direction, in deciding the size of sections that will be most advantageous to both producer and consumer. At the present day, I believe the six-pound box would be the extreme in one direction, and if the half-pound section is not the opposite extreme, it savors very strongly of it.

Probably these half-pound sections were profitable at the start, when monoplized by a few apiarists, as few knew anything about them; but I believe them to be wholly impractical for general adoption, especially by men who have hundreds of colonies to manipulate.

Knowersville, N. Y.

For the American Bee Journal.

Drones from Worker Eggs.

C. THEILMANN.

B. F. Carroll, in his able article on page 102, explains how bees can change a worker egg, so as to produce therefrom a drone bee, by removing the sperm of the egg which it receives in passing the seminal sac of the queen in the act of laying.

I am convinced by the experience of last summer, that bees can, at their will, rear drones as well as queens out of worker eggs; but I am not so sure that bees change the sex by removing the sperm from the egg. If this is true, the egg, of course, would be without male-sperm, and powerless to generate after the drone is matured. Is this reasonable in nature? If the drone-eggs which are laid by a perfect queen are not impregnated by the queen, where do the drones of such eggs receive the sperm or power to generate? Some will say: they get it in the food in their larval state. Is this answer correct? If it is, then bees produce queens by feeding them with royal jelly; but does this prove that the eggs from which the bees rear queens, are impregnated by the mother? Or, does it prove that the larva, or egg, which is fed on drone jelly, is not impregnated, or the sperm removed by the bees? Has Mr. Carroll any way to explain it?

O. L. Earlle, on page 134, writes thus: "The theory becomes more reasonable, if we can find a similar case in nature. For instance, the female fish first lays her eggs, and is closely followed by the male, who sprays the fertilizing fluid over the eggs." It looks to me as though there is as much difference in the fertilization of the eggs of fish and the eggs of bees, as there is between the eggs of a hen and of a fish. The fish is not impregnated before laying eggs, as bees are, and is of another nature. I believe that all the eggs laid by a properly impregnated queen, are fertilized before they are deposited in the cells, and that the bees make the sex at will, by way of food.

One thing is certain: if bees can make either a worker or a queen from what is supposed to be a worker-egg, impregnated, then the impregnation of such an egg has, surely, nothing to do with the sex; and it must be all in the food. This makes me believe that the eggs only receive from their parents the sperm to generate.

Why are drones produced by laying workers, not able to generate? Because the worker bee possesses no generating sperm, as she is not fertilized. It is also shown on the offspring of the different hybrids of black and yellow bees, that drone-eggs are impregnated before laid by the queens, and have received the sperm of the drone to enable them to generate.

Theilmanton, Minn.

For the American Bee Journal.

That "Priority of Location" Theory.

JOHN A. BUCHANAN.

My observation through 20 years of experience, fully coincides with Mr. James Heddon's views on this question. I understand his proposition to be this: A field that has been selected and occupied, either partly or wholly, and sustaining, or in the new future to sustain, all the bees that would be profitable to keep in that floral field; it would be folly in the extreme for others wishing to engage in the same pursuit, to enter that field to pursue the same calling, either as a specialty or only as a side issue. True, the civil law does not recognize any one as the sole proprietor and controller of any apicultural area; but, with Mr. H., I do claim that the law of right, reason, justice and common sense, will make it plain that none have a right to enter that field, more especially since it would not be found difficult to enter others unoccupied. If one has secured a fair field where he is able to make the business fairly profitable, no need of getting excited over a fortune at the business any place, it would be a great mistake, and an injustice to the first occupant of that field, for others to attempt to reap any part of the harvest. And should the rights of the first, especially the law of advantage, be ignored by others entering the same field regardless of consequences, the chances are that the first occupant will be greatly crippled in his business, and the transgressors on his rights will make an ignominious failure, losing their bees and capital, as well as credit. Many of us have seen this truth verified.

There is scarcely a community where, at some time, the bee-fever has not run its course. The only medicine that ever was discovered that would allay this fever, was a dose of stuff called by some, "overstocking syrup." We have seen people grow very enthusiastic, using every effort to increase their bees to the greatest number of colonies. Did the field become overstocked, or not? Does this state of affairs make more or less bee-keepers? Is it wisdom on the part of bee-masters, ever to encourage others to enter a field already occupied? I have been ground through this same mill twice; but after the smoke of the battle had cleared away, and I took a survey of the wreck and ruins, I was able to rejoice in a clear field with no opposition; and while my interests were seriously affected, the intruder's interest was a total wreck. There are almost countless numbers of unoccupied "bee-boxes" laying about, rotting, in almost every neighborhood. Let this decide whether you will attempt to enter another's "bee-ranch," whose it is by "priority of location."

Mr. Pond would have us believe that the "bell wether," leaders in apicultural improvements, are professional gentlemen. Well, I would agree with him if he had said or meant—professors in the science and art of bee-keeping; but he did not mean that; he meant professors in other callings. True, much credit is due some professional men for the great benefit they have rendered the bee-keeping world, but the specialist has had by far the best opportunities with all his practical experience, and all his time and attention bent in the direction of making the business financially, a success; and it is to this class of men who have made money in the business, and have shown others how to do the same, to whom we especially owe gratitude. As a rule, professional men who study bee-culture, do so simply for recreation, and do get well-stocked with theory on the subject; but the practical part we get, and all we need, from the specialist whose bread and butter is to be gotten out of his occupation.

Mr. Pond's citation to Rev. Langstroth and Dr. Dzierzon, proves nothing. We are all familiar with the fact that while these gentlemen were actively engaged in the pursuit of their respective callings, giving but little time to bee-culture, they made no very rapid strides in apicultural improvements. It was only when their almost undivided attention became enlisted in this fascinating pursuit, that they succeeded, and brought out such wonderful improvements.

Holliday's Cove, W. Va.

For the American Bee Journal.

The Cause of Bee-Diarrhœa.

W. M. WOODWARD.

I believe Mr. Heddon was reported as saying, at the Northwestern Convention, last October, that "all our losses were nothing to those caused by diarrhœa." To this, I think, we would all agree.

There is, therefore, no other subject which so imperatively demands the attention of the bee-keeper, and yet it almost eludes human sagacity, to discover either its cause or cure.

The subject has already been largely discussed in the Bee Journal. Various theories have been formed, and stoutly opposed and defended; and yet, while no conclusion has apparently been arrived at, I think there has been some good underbrushing done; and yet it seems to me that enough rubbish has been cleared away, so that I can begin to understand something of its true cause. I would not condemn any man for his theory on this matter, nor yet any theory, in itself, unless it be that of cold or *bacteria;* if the latter is ever advanced as a cause of bee-diarrhœa. Cold, I am satisfied, when all else is right, acts as a preventive rather than a cause; but may tend to aggravate it, in connection with excessive dampness, when already set in. There are left, then, three views of the cause of which I wish to speak, viz: (1.) Excessive moisture, etc., as set forth in Mr. Corneil's recent article. (2.) The pollen theory as represented by Mr. H.; and (3.) Breeding out of season.

I have no new theory to advance, but wish to concentrate the light we already have. It seems to me that the reason why there is so much difference of opinion, is not because our experiences differ, but because no one of the theories advanced is broad enough to cover all of our experience with the disease. What is *the* cause?

I think Mr. H. is somewhere reported as saying, that "bees almost never have dysentery without brood-rearing." Would it not be the truth to drop "almost," and say never? As that agrees with my experience, I will give a little of it. Last year I put 7 colonies into winter quarters; they were well supplied with bees and honey. Five out of the 7 died of diarrhœa, and were the only cases I had out of 33 colonies. Three out of the 5 were known to me to be breeding all winter; and when the other hives were emptied, brood was found in all stages of development. There was no reason to suppose that the 5 had more pollen than many others, nor that they suffered worse with moisture, or cold. Now, what was it?

I also had 9 colonies wintering with honey-boards and everything off clean, and the frames all opening ½ inch wide up into the caps, which were large, and tight as a good workman could make them; and, although, one of the 9 was queenless in the fall, all wintered well without disease; and, moreover, they consumed but little honey; no one of them reaching the top of a 12-inch frame, by 2 inches, until warm weather came. Now, why was it? The only protection given, in either case, was a little hay packed loosely around the body of the hive up to the cap, and a board leaned up before the entrance. I leave the reader to draw his own inferences from these facts.

But what is the relation which the several theories sustain to the disease? Brood-rearing is almost, if not an invariable accompaniment of diarrhœa. Is it secondary to the disease? In other words, bees are at first in a normal condition at the close of the honey season; and in a fatally abnormal one shortly after—dying with diarrhœa. Brood-rearing is also a normal condition, in warm weather. Is it abnormal in cold weather? If so, why? Is it to be supposed that the normal condition, *i. e.* health, begets the abnormal, direct? In other words, do bees pass directly from a state of health to a living death; and is their disease the cause of their attempt at self-propagation? Do bees raise brood *because* they are dying with diarrhœa? I think not.

What causes brood-rearing in mid-winter? What causes it any time of the year? It is true that a large number of nurse-bees may begin the work by over-feeding the queen, just the same as we may by stimulative feeding. It is also true that the presence of pollen may serve as a temptation. But is it *the* cause?

The pollen theory has some truth in it. Its advocates are one step in the right direction, by excluding it; not because it causes diarrhœa, but because it is made use of to get up a state which other means serve to abort, I might say, and thus cause disease. I am satisfied that brood-rearing is not, other things favorable, a cause of disease; neither is eating of pollen a preventive of starvation.

Confinement must now be considered in its relation to the disease. All agree that, when in a healthy condition, bees can stand confinement for a very long time. The difficulty arises when other conditions are not favorable. Bees are sometimes healthily wintered without a flight for 3 or 4 months. Confinement is not, therefore, a cause of disease, except to aggravate some abnormal process already set in. But confinement and brood-rearing cannot go on together for any length of time, without disease.

No one single cause ever produces diarrhœa, (not even sour honey); but a chain of causes, each of whose links constitute some one's theory of the disease. I will name the links of this chain, viz: brood-rearing in confinement, in damp hives, and cold weather. These, when taken together, are all abnormal and unhealthy.

Cold we must have, but why heat up our hives inside, or suffer the bees to do so, to generate steam to cover combs and hives with frost; and to induce the rearing of "brood out of season," which, I aver, is the *first* on the list of causes of diarrhœa. Protect the bodies of the hives just enough to keep frost from forming on them; but open thorough ventilation into a large cap made to serve as a movable condensing-chamber, and when frost forms in it, and is in danger of melting, lift the cap and scrape or brush it out; replace the cap again, cold or hot, and I know there will be less complaint about dampness and diarrhœa. The prime first-cause lies in over-heating within the hive; thus causing brood-rearing when it is too cold for a flight without. This causes a state of matters in January which should take place in April.

I believe that there are two ways to avoid winter-breeding, and all this train of evils: (1.) By keeping them cool enough to be quiet, slightly numb with dry cold air, which is easy enough to get at any time; or, (2.) Winter by "high pressure," excluding pollen and dampness from the hive; thus making extensive brood-rearing impossible.

Custer, Ill.

SELECTIONS FROM OUR LETTER BOX

Willows and Maples Budding.

Spring has just opened, and the soft maples and willows are beginning to bloom. My bees are getting some pollen to-day; just six days sooner than last spring. We expect a good summer for bees and honey. I will start with 35 colonies this spring. I wintered 45 on the summer stands; but lost 5, and sold 5. Bees are light in honey. I had to feed some.

JOHN REY.

East Saginaw, Mich., April 6, 1884.

Bee-Keepers' Excursion to Iowa City.

Bees, in this vicinity, as far as reported, are in much better condition than last year at this time. Miss Katie Case, out of 5 colonies, lost 1. The loss of O. Clute, of Iowa City, is nominal. G. B. Engall's loss, out of 156 colonies, is 40. They were wintered in a house packed with sawdust, and the bees drew dampness. My own loss is 3 per cent. I shall send to all the members of the Davenport Association for a full report, and endeavor to have it at farthest by May 15. All bee-keepers who wish to join the excursion from Davenport to Iowa City, in the latter part of May, as fixed by resolution at our last annual meeting, will please report to me at once, by mail; and if we can raise a sufficient number to hire a car, the fare will be much reduced, and the facilities for convenience and comfort much increased.

I. V. McCAGG.

Davenport, Iowa, April 7, 1884.

Bees Gathering Pollen.

My bees have wintered well, but consumed more food than usual. Out of 176 colonies, 14 have starved. The remaining colonies are in fine condition. On March 18, we had 2 feet of snow; and on the 31st bees were gathering pollen from soft maple.

C. THEILMANN.

Theilmanton, Minn., April 9, 1884.

My Experience with the Cyprians.

In the fall of 1881, I procured some bees from a neighbor. Among them was a colony of Cyprians. They are reported as being a very cross race of bees. I set them in the cellar, along with my other bees, not caring whether they lived or not. Upon putting them out, in the spring, I was astonished to find only about a dozen dead bees; but they were later in commencing to fly than any other colony in the yard. They cared nothing for smoke, and I soon discovered that I succeeded best without it. I am now handling my whole apiary mostly without using the smoker. My experience in handling Cyprians has been of great value to me, and I think, after one week, I can successfully handle the crossest bees, without smoke. I have lost only one colony of Cyprians in 3 years; and that died of old age. My 32 colonies have produced 4,800 pounds of extracted honey, and 1,950 pounds of comb honey in one season. So much for the abused Cyprians. Give them the credit they deserve. I believe that their being so cross, is the result of the manner in which they are handled.

Medford, Minn. J. E. CADY.

Drones Flying.

My bees are in fine condition; I lost but one colony in wintering, out of 70. I saw drones flying on the last day of March, from two different colonies.

JAMES RONIAN.

Villisca, Iowa, April 5, 1884.

My Experience with Separators.

Last spring I had a tinner cut 600 tin separators, and I gave them a fair trial. I do not like them. I had very nice honey, as straight as I want. I could have glassed it, but there was not enough of it. I use the two-pound sections, and one separator between each; putting the sections on the top of the frames, the thickness of a lath between them and the sections. I use the "Simplicity" hive. My Cyprian colony produced 156 lbs. of comb honey during the past season. I had 3 stories in the hive; the two upper ones without separators, and the lower one with separators. They filled the upper ones, but the lower one was not more than half filled. Why did the bees go through the first story, which had separators, to the upper stories which had no separators? An Italian colony did likewise. I use the best thin comb foundation that I can procure; and I shipped the honey produced on that, without separators, to Boston, and it went through all right. From this time on I shall discard the use of separators; or only use one to every 3 sections.

Casey, Ill. D. R. ROSEBROUGH.

My Bee Feeder.

I have sent you one of my bee-feeders. I make them to cover 5 or 6 frames, or enough to cover frames for winter. You will see it can be set on the frames in the fall, and all the troughs used to quickly feed for winter; and there let it remain until they are ready to apply sections. As they are already on the frames, a very little feed can be given in one trough, for stimulative feed; or water can be given, and that, too, just where we wish, as we can see where the cluster is, right through the screen. As there is a passage way all over the frames, the bees can reach all the feed either in the combs or feeder. You will see one very great advantage, viz: the cloth can be lifted, or rolled up from over the feeder, and not enrage the bees; nor can they fly out. As it is so low, there is ample room for cushions and any amount of warm packing, etc., so we can keep the bees just as warm as if no feeder was used. To apply the syrup, set a funnel over the wire cloth, or centre of a trough, and turn in the feed slowly; or it does fairly well if no funnel is used. You will see that the rim that holds the wire cloth is loose, so that if we wish to clean out the feeder we can do so; and again, to ship the bees we take off the rim with the wire cloth, and pack all the troughs with moss; then return the rim, and wet the moss; and invert over the frames, of course, on another wire cloth, which covers the whole hive. After used as a shipping waterer, the moss can be removed, and used as a feeder again. You see, with this feeder, the feed is right where it is warmed by the bees, and where a light stock will hive; when, if away down at the side, they would starve. The feeder is large enough to feed up winter stores very quickly, and still feed as little as we wish. In fact, it answers a variety of purposes; even as a passage way, and one through which we can see the bees. In my mind it is very desirable. I am testing it on some of my colonies; and I am much pleased, as are all who have tried them. I think they are well worth 50 cents; and as I have no patents on any invention, I feel pleased to show it to the bee-keepers, with a feeling that I have done a little good, at least. I have been studying on this thing for a long time. I like everything connected with bees.

E. P. CHURCHILL.

North Auburn, Me.

[The feeder is placed in our Museum. It looks as if it might be a practical one.—ED.]

What was the Trouble?

Last June I removed an imported queen from a large colony for the purpose of exchanging with a friend; the colony was kept queenless about five days, and then a young queen was introduced, accepted, and began laying. In 4 or 5 days after, I found this queen balled, and she died the next day. I introduced another queen to this colony; she was accepted, began laying, and continued so to do for some 6 or 7 days, when, at night, I found her alive in front of the hive, and queen-cells started. I introduced this queen at once to another colony by exchange, where she now is, and the queen exchanged with her was introduced into the first colony. She began laying, and filled several combs, when the bees went for her, and drove her out of the hive, and started more queen-cells. This time I allowed the colony to take its own course, and rear a queen for itself, which was done, and all has been quiet since. Can any one give a satisfactory reason for the above?

J. E. POND, JR.

Foxboro, Mass., March 20, 1884.

Bees in Southern Michigan.

Upon examination, a few days since, I found my bees all well and in fair condition. We hope for a good crop of honey this season, in southern Michigan; and if our hopes are realized, it will be the first good season for 4 years. Willow and soft maple are in bloom; but no pollen is being gathered.

F. L. DRESSER.

Hillsdale, Mich., April 8, 1884.

Why Bees Swarm Out, etc.

Recently, a colony belonging to one of my neighbors, swarmed out. He immediately endeavored to discover the cause. Combs all dry and clean, and enough honey, were found in the hive, but not a particle of pollen. If others, whose bees do likewise, should find like conditions in the hive, it may prevent a swarming out by seeing that the bees have a supply of pollen as well as of honey. Two years ago, I had the curiosity to time the flight of an Italian bee. She filled herself with honey, went home and unloaded, and returned in 4½ minutes. The hive being 2¼ miles from the place I fed her, made her time 1 mile a minute, including stops. When honey is coming in freely, I will try to find how long a time is required for a bee to go to a field, gather, load and return.

WM. MORHOUS.
Dearborn, Mich., April 9, 1884.

Bees Attending a Wedding.

Mr. J. C. Wilms, of Waupun, Wis., concludes he would rather be to the expense of swarm catchers than to be obliged to climb church steeples. He relates this anecdote: His daughter was to be married July 10, 1883, at 8 p. m., in the church near by. About one week prior to this event, he had put 2 swarms into one hive. Later developments proved they had gone to house-keeping, on opposite sides of the hive; and when they happened to get near enough to quarrel about the residence, one swarmed out at 7 p. m., July 10, deciding to locate in the church steeple by entering just above the belfry, and passing through a hole in the ceiling over the bell. They are about 75 feet above the ground. The wood-work enclosing them is some 4 inches thick. Those bees were determined to, and did attend the wedding; for it came off just one hour after their arrival. This is one of the peculiar freaks of bees. On Feb. 7, 1884, the bees were alive; and upon ringing the bell a few live ones dropped down.

J. W. BAILEY.
Ripon, Wis., April 9, 1884.

Backward Spring.

My 44 colonies of bees wintered on the summer stands without the loss of one; but the spring is backward, and they will have no peach bloom this year, for the cold winter nipped them all in the bud, and killed the most of the trees; but I expect there will be plenty of apple blossoms.

JACOB COPELAND.
Allendale, Ill., April 9, 1884.

Convention Notices.

☞ The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest; for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twitchell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."

C. M. CRANDALL, *Sec.*
Independence, Mo.
H. SCOVELL, *Pres.* Columbus, Kans.

☞ The Des Moines County Bee-Keepers' Association, will meet in R. C. Crawford's Hall, in Middleton, Iowa, on Tuesday, April 22, 1884, at 10 a. m. sharp. All who are interested in apiculture are invited to attend. We will have a programme on various subjects of interest to bee-keepers.

JOHN NAU, *Sec.*

☞ A general meeting of the County of Oxford, Ont., Bee-Keepers' Association, will be held in Woodstock, Ont., on Saturday, April 19, commencing at 10 a. m. Important subjects will be discussed, among which will be, "Foul Brood," "Spring Management of Bees," "Best Methods of Increase," etc. M. S. SCHELL, *Sec.*
J. B. HALL, *Pres.*

☞ The Union Kentucky Bee-Keepers' Association will hold its spring meeting at Eminence, Ky., on April 24, 1884.

G. W. DEMAREE, *Sec.*

☞ A bee-keepers' association is to be organized in Western New York on Tuesday, May 6, 1884, at Randolph, Cattaraugus County. In this southern-tier district there are a large number engaged in bee-keeping, and an association of this kind has long been needed. A general invitation is extended to all interested in bee-keeping.

W. A. SHEWMAN.

☞ The Iowa Central Bee-Keepers' Association will hold its semi-annual meeting in the Court House at Winterset, Iowa, on April 18, 1884, at 10 a. m. All are cordially invited. All visitors from abroad will be hospitably cared for. Members are requested to bring their baskets well filled, and we will have a general good time. Any one having new apiarian implements, or any thing that will advance the interest of the association, are requested to bring them for exhibition. J. E. PRYOR, *Sec.*
A. J. ADKISON, *Pres.*
Maple Grove Iowa

☞ The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, *Sec.*

☞ The Western Michigan bee-keepers, will hold their spring meeting at Berlin, April 24. F. S. COVEY, *Sec.*

☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyahoga County, O. All interested are invited. J. R. REED, *Sec.*

☞ The Eastern Indiana Bee-Keepers' Association meets at Richmond, Ind., April 24, 1884.
C. N. BLOUNT, *Pres.*
G. REYNOLDS, *Sec.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884.

JONATHAN STEWART, *Sec.*

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

☞ The Bee-Keepers of Tippecanoe and adjoining Counties, will hold their regular quarterly meeting at room No. 3, in Purdue College, in the city of Lafayette, Ind., on May 6, 1884. All lovers of the honey bees are respectfully invited to be present and take part in the discussions.

MRS. JAS. L. HAVENS, *Sec.*
DR. L. SNYDER, *Pres.*

Local Convention Directory.

1884. *Time and place of Meeting.*

April 18.—Iowa Central, at Winterset, Iowa. J. E. Pryor, Sec.
April 22.—Des Moines Co., at Middleton, Iowa. John Nau, Sec.
April 24.—Union Ky., at Eminence, Ky. G. W. Demaree, Sec.
April 24.—Eastern Ind., at Richmond, Ind. M. G. Reynolds, Sec.
April 24.—Northern Ohio, at Norwalk, O. S. F. Newman, Sec.
April 24.—Western Michigan, at Berlin. F. S. Covey, Sec.
April 24, 25.—Western, at Independence, Mo. C. M. Crandall, Sec.
April 24, 25.—Texas State, at McKinney. W. R. Howard, Sec.
May 3.—Progressive, at Bedford, O. J. R. Reed, Sec.
May 6.—Tippecanoe Co., at Lafayette, Ind. Mrs. Jas. L. Havens, Sec.
May 6.—Cattaraugus Co. N.Y., at Randolph, N.Y. W. A. Shewman.
May 6.—Southern Wisconsin, at Janesville. J. T. Pomeroy, Sec.
May 15.—Tuscarawas Co. O., at Port Washington, O. A. A. Fradenburg.
May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill. Jonathan Stewart, Sec.
May 26.—Will County, at Monee, Ill. P. P. Nelson, Sec.
Oct. 11, 12.—Northern Mich., at Alma, Mich. F. A. Palmer, Sec., McBride, Mich.
Oct. 15, 16.—Northwestern, at Chicago, Ill. W. Z. Hutchinson, Sec.
Dec. 10, 11.—Michigan State, at Lansing. H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ Now is the time to plant young basswood trees, for future pasturage for your bees. You may see them advertised in this paper.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Potatoes as Bee Food.

We have found out, last winter and this spring, that sweet potatoes baked in the stove and well peeled, answer very well for bee feed. They will suck and eat a common sized potato in little or no time. Perhaps this is an old discovery; but as we have heard no comments about it yet, we bring the subject out as new to us.

Marksville, La. J. E. DIDIER.

ANSWER.—I have many times heard that bees would use nitrogenous food in the way of bread, potatoes, etc. I have never had any occasion to experiment in that line; but should think that baked sweet potato might be used by bees as a substitute for pollen.

Bee-Moth.

Will Mr. Heddon please say whether there is any danger of moth injuring frames of comb foundation packed in a honey-house? HALLETT & SON.

Galena, Ill.

ANSWER.—Though I have handled foundation quite extensively from its first advent, I have never yet seen the larvæ of the bee-moth any where about it.

The Value of Queens.

Will Mr. Heddon please answer the following:

1. How long are queens prolific; and how long should they be kept?

2. Will a colony kill off its aged queen and supply itself with another; or must we kill her? What time of the year is the best for supplying queens?

3. Of what value, if any, are the drones after the queen is mated?

4. Do you believe in clipping the queen's wings?

5. After having diarrhœa, if bees fly freely again, are they not all right?

6. I noticed my bees flying out of the entrance, directly into the grass in front of the hive. What caused such actions?

7. Will you give some instructions, through the BEE JOURNAL, on the care of queens? SUBSCRIBER.

ANSWERS.—1. Queens naturally reared, or properly artificially reared, are usually prolific, and worthy for 3 or 4 years; and will at once be superseded by the bees when they become unprofitable, as they will fail all at once.

2. I believe that where other management is right, it is best to leave the superseding of the queen to the bees. If you attend to it, the proper time is when you find the old queen is worthless, and the bees fail to supersede her.

3. The old theory is—no value; but I am not sure that that theory is correct.

4. I do not. Not that I am sure that it injures her, or her progeny; but with my system of securing swarms, I find less labor and trouble when the queen's wing is not clipped.

5. After the disease has developed to a certain point, an unloading of the intestines is followed by immediate death.

6. I could not say without witnessing the phenomenon.

7. As you will see by the answers above, we depend mainly on the bees to take care of the queens, which they are sure to do in almost all cases.

Removing Bees from Cellars.

1. Is it advisable to remove bees from cellars, for a cleansing flight, while they seem to be doing well?

2. If so, is it important to place them on summer stands, exactly as they were during the previous season? W. W.

ANSWERS.—1. No: I think not.

2. Not if they have been in the cellar any considerable length of time.

Bee Pasturage.

How many bees will a piece of land support, where the bees are north of a lake, with elm, cotton, ash, willow, locust, and lots of vines in plenty? There are about 10,000 acres in a half-circle of four miles. Would you advise keeping the bees all in one yard?

Bee Dale, La. WM. J. DAWSON.

ANSWER.—I am so little acquainted with Southern honey resources that I would hardly venture a reply. I could not say, in regard to keeping all your bees in one apiary, as you nowhere state how many colonies you have.

Age of Queens, etc.

Will Mr. Heddon please answer the following:

1. Can a person keep pure Italian stock in a field where other races of bees are kept?

2. How old is the queen which issues with the swarm?

3. Do you use drone-traps to exclude the drones; or is it just as easy for the bees to kill them off when they see fit? S. F. DAILY.

Mt. Hope, Kans.

ANSWERS.—1. You cannot have all your queens purely mated in a field where the drones from other races are in the air in considerable numbers.

2. The queen that issues with the first, or prime swarm, is, as a rule, one or more years old. With all after-swarms, the queen is from a few hours to a few days old.

3. I am yet rather of the opinion that there is something impracticable in trying to exclude, retain or separate the different genders of bees, in a hive, by using different sized openings.

Japan Plum Tree.

Having one of those trees in my yard, near my bees, I had occasion to watch the actions of my bees on it. The tree was itself a "swarm of bees." As it blooms in December, it seems to me it ought to be the best thing out, as a life preserver for bees in winter. The sweet scent of the bloom is that of honey itself, and it blooms at such a propitious time of the year. Would it not be well to plant some of these trees about the apiary?

JULES E. DIDIER.

Marksville, La.

ANSWER.—I should think so; though I am not at all posted in regard to Southern honey flora.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 14, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURBER & CO.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirous of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Demand for choice white comb 1 and 2 lb. sections continues good at 16@17c. Dark and irregular comb not wanted. Extracted in fair demand at 8@9c.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—We again advise our shippers not to put their extracted honey in old or second-hand tins and cases. The wood of old oil cases is saturated with oil, the nails will not hold, and the cases often arrive in a broken and dilapidated condition. They smell of coal oil, look rough, and are not as salable as good, clean, new packages.

Have a partition in your cases between the cans, thus making them strong enough to ship to Europe. Comb honey in Harbison sections and frames is the most salable on this market, and it is our experience of 18 years, if you want the top price for comb honey, put in your cases only the white and that which is straight, and will come out clean with the sections. You will do better to extract the uneven and crooked combs.

White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY — Steady; demand and supply both small. Comb, 12@16c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is unchanged with us. There is a continued steady demand for choice white 1 lb. sections at 18c; 2 lbs. move more slowly at 16@17c; but for second quality there seems to be no demand. Our supplies of 1 lb. are kept well down. Extracted does not sell at all at any price.

BEESWAX—Wanted at 35c.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

☞ See M. Bailey's advertisement; he has Clover Seed for sale.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the Bee Journal as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly Bee Journal and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will be 50 cents.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

BinghamSmoker

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. Doolittle.

Prices, by mail, post-paid.

Doctor smoker (wide shield)..	3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)....	2½ " ..	1 50
Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker...................	2 " ..	1 00
Little Wonder smoker..........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch..................		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

For Sale!

Eleven hundred lbs. of Beeswax.

J. C. CONVERSE,
16A3t **Ravenna, Portage Co., Ohio.**

Don't Fail to Send to the inventor and manufacturer of the **Bailey Swarm Catcher,** for Circular and Price List of Catchers and Bee Supplies.
16A4t **J. W. BAILEY, Ripon, Wis.**

THAT DRONE TRAP!

"Trap received. I tried it yesterday (March 27,) and caught it full of drones."
L. C. REED, New Orleans, La.

Sample, by mail, 65c.; by express, 50c.; in the flat, per dozen, including one made for Model (13 in all) $3.00. Illustrated Circular free.

HENRY ALLEY,
15A2t WENHAM, MASS.

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF
All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

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—THE—

VICTOR HIVE

is operated upon a new principle by which the sections are placed in vertical lines with the brood frames; continuous passages being effected in a

Practical Manner!

It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t **H. C. WHITE, MADISON, IND.**

HEDDON HONEY CASE,

Ready to nail, per 100, $15.00. Hives cheap and good. N. E. DOANE,
8D6t PIPESTONE, Berrien Co. MICH.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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Early Spring! Order Now!

To introduce my Italian Queens, I will send one of my Tested Queens, if ordered before April 20, for $2.00. Send two dollars and less, in common letters, at my risk. Address **E. P. BAKER,**
10A8t Box 342, DES MOINES, IOWA.

NEW INVENTION.

Patented Oct. 17, 1882.

Bees forced to leave their surplus honey before removing it from the hive. Saves valuable time and labor; prevents robbing, and the liability of being stung. The Bees are first cut off from the brood hive, by closing the openings in a slat honey board; the conductor is then placed in position, which connects bees in surplus honey with brood hive. They soon find that they are imprisoned, and being anxious to escape, pass out through the Conductor into the brood hive. It also prevents their return.

Conductor and Langstroth hive complete.................................$6 00
Conductor and Honey Board, any size, and Sections to fill, which shows all the improvements.................... 1 50
Conductor, by mail........................ 50

Send for Circular giving full particulars.

JOHN W. SILCOTT,
14D4t SNICKERSVILLE, VA.

Pure Italian Bees and Queens!

Send for Price List to
A. B. MILLER, Wakarusa, Elkhart Co., Ind.
7D6t

SMITH & SMITH

Wants to give away 5,000 of their Illustrated Catalogue and Price List of **Bee-Keepers' Supplies. Special Attention** given to the

Simplicity One-Piece Section,

Also Hives, Smokers, Foundation, etc.

SMITH & SMITH,
6D10t KENTON, Hardin Co., OHIO.

ITALIAN BEES AND QUEENS.

Send for Price List to
D. R. BROWN, DES MOINES, IOWA.
10D7t

SEND YOUR NAME AND ADDRESS FOR MY 20-page Price List of Italian, Cyprian and Holy Land Colonies, Nuclei, Queens and Apiarian Supplies. H. H. BROWN, Light Street, Col. Co. Pa.
12D4t 4B1t

Bees! Queens! Nuclei!

INSTRUCTION IN BEE-KEEPING.

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

QUEENS.—I breed Queens by the best methods, and from the best stock. Queens ready after May 20th. Untested, $1.00; tested, $2.00; selected tested, $3.00.

NUCLEI, with untested Queen, $3.50; with tested Queen, $4.50; with selected tested Queen, $5.50.

INSTRUCTION.—July 7, 1884, I shall begin instructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address, **O. CLUTE,**
10Dtf IOWA CITY, IOWA.

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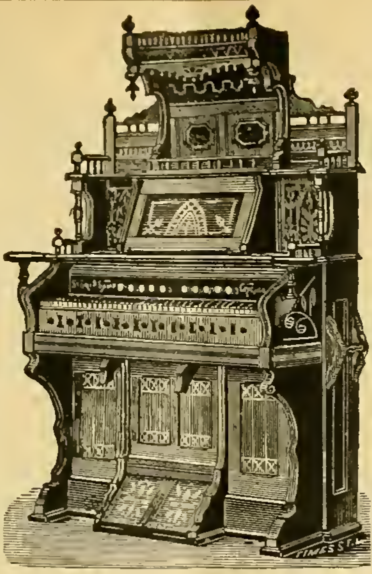

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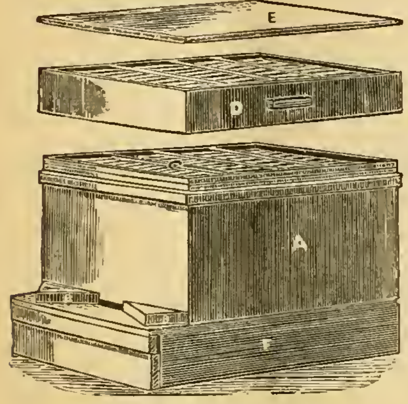

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British Bee Journal	3 75	3 50
The 8 above-named papers	9 00	7 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ The Pike County Bee-Keepers' Association will hold its semi-annual meeting at Pittsfield, Illinois, Saturday, May 3, 1884, at 10 a. m. All are cordially invited. Any one having new apiarian implements, or any thing that will advance the interest of the meeting, are requested to bring them for exhibition.

T. C. BUNKER, *Sec.*
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☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed).
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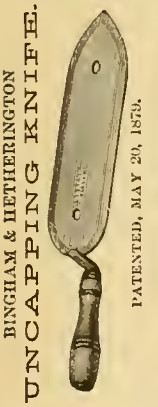

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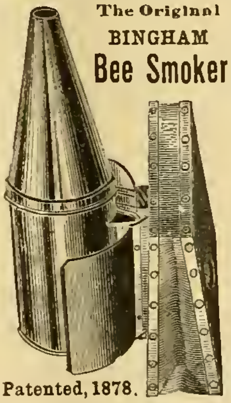

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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., APRIL 23, 1884. No. 17.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Honey Crop of California.

In the BEE JOURNAL for April 2, we remarked as follows concerning the honey crop of California for the past year, and the prospects for the present season:

We have received the Annual Review of California Crops for 1883, by Geo. W. Meade & Co., San Francisco, Cal. They have put the crop of honey for the past year at 960,000 pounds, and divided thus: Comb honey, 125,000 pounds; extracted honey, 835,000 pounds. They make the following remarks about the honey crop: "The product of California comb honey, last year, was very light, scarcely more than enough to supply the home demand, and prices generally ruled high. Extracted turned out far better than was anticipated, but owing to the large crop of domestic honey East, the sale here has been dull and slow, and a considerable surplus will have to be carried over into the new year. The European demand for California honey has also been limited, though our honey is preferred there when prices here will permit of business."

Now we have received the Annual Review of the crop by Stearns & Smith, who supply us with the weekly honey market report. They write us as follows:

> "We believe our report to be as near correct as can be got at, and we produce our figures from the only sources they can be obtained, and are facts. As orders are coming in lively for empty packages for the new crop, the present outlook is for a large one."

From their Review we glean the following:

Number of cases received in this market during past six years:

Years.	Cases.
1878	38,337
1879	8,443
1880	26,782
1881	10,658
1882	14,489
1883	13,804

The average weight of cases being about 60 pounds.

Receipts in barrels and kegs for past four years:

Years.	Barrels.	Kegs.
1880	1,156	126
1881	456	84
1882	291	23
1883	3	2

Receipts from Jan. 1, 1884, to date, 370 cases.

Exports for the past six years by sea and land from San Francisco, and by rail from interior points have been

		By sea from San Francisco.	By rail from S.F.& Interior.
Years.	Cases.	Lbs.	Lbs.
1878	4,978	518,714	1,254,889
1879	13,675	———	214,216
1880	7,890	150,806	861,050
1881	8,849	62,700	378,370
1882	3,612	———	527,680
1883	6,663	———	266,400

Of last year's shipments overland, 90,720 lbs. were sent from San Francisco, 174,630 lbs. from Los Angeles, and 1,050 lbs. from Sacramento.

Exports for 1884 to date, by sea, 1,953 cases from San Francisco; by rail, exclusive of March shipments, 5,070 lbs.

Since the first of June last, receipts have been 12,684 cases, 2 barrels and 2 kegs. Allowing one-third of the cases to have been comb honey, we have the following showing in pounds:

Extracted—8,456 cases	1,014,720
Extracted—barrels and kegs.	1,000
Comb—4,228 cases	253,480
Shipped by rail from interior	118,340
Total	1,387,540

The above total does not include stocks consumed, or still held in the interior, or shipments by sea from Southern Coast points. These are unknown quantities, but if they could be definitely arrived at, would, beyond doubt, materially increase the figures showing last year's product.

Assuming the unknown quantity the past season to be about the same as it was in 1882, last year's yield appears 220,000 lbs. less than in the preceding season.

Throughout the season choice comb and extra white extracted have found custom at good figures. The market is now practically bare of what may be termed fancy qualities. There is considerable off grade honey still offering, and prospects are not encouraging for a clean-up of this stock, except at very low figures.

Now, as to the indications for the present year, Messrs. Stearns & Smith give the following as their opinion:

> Present indications are that the coming yield will be large, and in excess of any crop since 1878. As the local consumption will only absorb a small proportion of a large yield, and as the figures current here for some time past have been too high to encourage large shipments to distant points, it is probable, if the crop proves as large as now anticipated, that prices in 1884-85 will show a lower range than they have in the season nearly closed.

They are of the opinion that the local consumption of honey is not on the increase, and remark as follows on that point:

> Although the population of the coast is steadily and rapidly increasing, the local consumption of honey is not so large as it was some years ago. Honey is now regarded more of a luxury than a necessity, and as a consequence, only strictly choice is in favor with local buyers. The decreased local consumption is to a great extent due to the abundance and cheapness of fruits during late years, encouraging the more extensive use of the latter by persons of ordinary means.

Instead of the crop of the past year being 960,000 pounds as stated by Messrs. Geo. W. Mead & Co., it seems that it was 50 per cent. more than those figures, or 1,387,540 pounds.

These figures will be very interesting to the many who are now anxious to get statistics of the honey production of America.

◆

☞ The Price List of Thomas L. Thornton, Dividing Ridge, Ky., is on our desk. Bee-Keepers' Supplies.

◆

Cure for Gravel.—Sweeten your tea with equaly parts of honey and sugar. It never has been known to fail. If possible secure honey from clover instead of wild flowers and buckwheat.

◆

☞ We have received the Price List of S. A. Dyke, Pomery, O.—4 pages—Bees and Bee-Keepers' Supplies.

CORRESPONDENCE.

For the American Bee Journal.

Bee-Space above Brood-Frames, etc.

G. M. DOOLITTLE.

On page 58, I see a desire manifested that the BEE JOURNAL call forth the expression of the honey-producers of the world relative to the bee-space above the brood-frames, now used in most of the hives in the country.

Years ago, when I first began to keep bees, I used a few box hives for two years, which had, as a top, a board ¼ inch thick. In this top were slots cut, 1 inch wide by 5½ inches long, running across the combs, for entrances to the 6-pound boxes, which were then used. The combs in the brood-chamber were expected to be built in a certain direction; guides of thin wood, brought to a sharp edge on the under side, were used to secure this object, and these slots in the top were so spaced that three openings between the combs below were to come into the slot; thus giving the bee a passage way of about 3 inches by ⅜ of an inch from the brood-chamber to the boxes. The boxes had slots in the bottom to correspond with the slots in the top of the hive, and were set directly on top of the thin slotted board.

This gave a space of but ⅜ of an inch, which separated the main combs in the hive from the boxes, as the bottom to the box was but ⅛ inch thick. At the same time I was using the Langstroth hive, which had 5-16 inch bee-space between the frames and honey-board, which was ⅜ of an inch thick. Over the slots in the honey-board were placed the boxes, the bottoms of which were ⅛ of an inch thick, which gave a space of a 3-16 of an inch through, which the bees must pass before entering the boxes when coming from the combs below. As a consequence, the bees would enter the boxes in the box-hives much the quicker; the result of which was, that all things being equal, I could get the most surplus honey from the box-hives. But as I could not keep the bees equal as to numbers in the box-hives with those in the others, and for other reasons too numerous to mention, which makes the movable frame hive so much preferable, I decided to do away with the box-hives, after which I began to study how I could do away with the honey-board and bee-space in the Langstroth hive; thus making the top similar to the box-hive. At first I left the bottom of the box entirely off except a thin strip at each edge to hold the box in shape, setting the boxes directly on top of the frames; but as the combs in the filled boxes would be attached to the frames below, so as to nearly spoil them by removing, I soon gave it up.

Next I set the boxes directly on the frames, using them with full bottom, as they were used on the box-hives. This plan gave good satisfaction as to the product of honey, but it was slow work putting on the boxes, as the bees must all be driven from the top of the frames before the boxes were put on, as many would be crushed and killed underneath them. At about this time I adopted the wide-frame system, or case-and-separator system, as I prefer to call it, which did away with the honey-board entirely; so that I have not had a honey-board in my apiary for nearly 12 years.

To prevent the killing of bees, I gave a scant ¼ inch space between the bottom of the cases and the tops of the frames. This worked so well that I have used it mainly till the present time, with the exception of some few hives where the cases rested on tacks to keep them ¼ of an inch above the frames. These tacks got pulled out of a part of the hives, which let the cases down on the frames, in which shape I have used them with good results, except that some bees would be killed in handling them. The past season I used several hives with only six brood-combs, as has been explained elsewhere, in which case it became necessary to set the cases directly on top of the frames.

To prevent the killing of the bees, was the question which now came up. To accomplish this, all I had to do was to raise the frames so that the tops of them came even with the top of the hive, when I could slide the cases along on the top bars of the frames; thus pushing the bees out of the way as the case was put on. In this way, I was master of the situation, and had the difficulty solved, regarding how I could use my sections to the best advantage. It will be understood that on these hives my cases and entrance to the sections go crosswise of the frames, and not parallel with them, as do the sections in most hives. I expected that these cases would be so glued down with propolis, that it would be hard work to remove them; but in this I was mistaken, for I can remove them much easier than I can those cases which have comb and honey put between the bottom of them and the frames of the hive; and also much easier than I could a honey-board fastened in the same way, where it is desirous to use sections 1½ inches in width, without separators running parallel with the brood-frames.

Dr. Tinker's plan of continuous passage ways, is an excellent one. In this way a number of very thin slots, a little wider than the top of the frames, are so fastened together that each slot comes over the top-bar of each frame; thus making a rack covering the top of the hive. This rack is to be slid on top of the frames at the beginning of the honey harvest; and so left till fall, unless the brood-chamber is to be opened. Immediately on top of this is placed (by sliding on) an intermediate rack which is very nearly like the first. Upon this the rack of sections is placed so that to remove the sections or replace them, all there is to do is to slide this intermediate rack back and forth on the first; or the rack of sections can be slid on the first rack if desired, and the intermediate rack be used in tiering up. By either of these plans the objectionable shallow bee-space is overcome, and the sections placed as near the brood as possible, without danger of killing bees; thus securing a greater yield of honey, which yield is what we are all after. If a greater yield of honey can be obtained by the above plan (which I have been studying on for over 12 years), and that with the same amount of labor or expense to the apiarist, I cannot see how it can "retard progress."

Will Mr. Heddon please tell us what his reasons are for preferring the shallow space; and also his objections to the above plans for doing away with it, if he has any such objections?

I also notice on page 58, an allusion to Italian bees objecting to this shallow space. In all my experience I have failed to note any reluctance on the part of Italian bees to enter the sections, whether this shallow space was used or not. I have often seen it stated that the hybrids and black bees would enter the sections much more readily than the Italians; but from close watching since 1871, I could not see but what colonies of different strains of bees would enter the sections at about the same time; providing that the brood-chamber was contracted so that little or no empty comb was therein at the time the honey harvest opened.

The greatest advantage, in my opinion, which the Italian bees possess over other strains, is in their producing a large amount of brood in May and June; thus getting plenty of workers to gather the harvest, and then slackening up in brood-rearing during the harvest; thus avoiding a needless consumption of honey during the honey harvest, and after it is passed.

That an Italian queen mated with a black drone will produce workers of the best type to produce comb honey, I am well aware; for a direct cross always produces vigor; but how shall we get such workers without the Italians to start with? I really hope none are talking of breeding from hybrid stock, for the purpose of being able to sell all the queens they rear with no fear that any one can have any claims on them for purity.

To the honey-producers of this country, the Italian bee is an indispensable thing as a starting point; and those who ignore this point, are "off the track," according to my views, after an experience of 12 years with both Italians and hybrids in my yard. The result of trying to build up a stock of bees by breeding from a hybrid mother, has proved in all cases, which I have tried, that every generation grows poorer and poorer, instead of proving any better.

Borodino, N. Y.

☞ The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers' association. All are earnestly invited to attend.

A. A. FRADENBURG.

For the American Bee Journal.

Facts in Wintering Bees.

O. E. COOLEY.

As the subject of wintering bees successfully seems to be as far from satisfactory solution as ever, I will give my experience of 13 years.

I began with the box-hives, occasionally getting a few pounds of surplus honey. When putting them into the cellar for the winter, I placed the hives bottom up; the bottom being left entirely open all winter. I lost only one colony in that condition, and that died of starvation. I have used a hive similar to the Langstroth.

I prepare bees for wintering as follows: As soon as the clover and basswood season is over, examine every colony; remove the supers from all the colonies not having honey enough to carry them through the winter; and if at the end of the season they still have not stores sufficient for winter, feed immediately of good extracted clover honey. This is all the preparation for winter that I ever make. I never extract the honey and feed sugar; never make holes through the combs for winter passage ways; never take out frames and put in division-boards; and never use cushions, chaff, or packing of any kind, but simply let them remain just as they stood on the summer stands. The tops of the frames come nearly flush with the tops of the hives. I spread a sheet of cotton cloth over the top, upon which the board cover is placed. The cover is simply a flat board that tightly covers the top of the hive. The bees soon wax the cloth tightly to the tops of the frames, leaving but little or no upward ventilation, and no chance for the bees to pass over the tops of the frames at all. If any one should ask how the bees could pass from one frame to another as their honey is consumed, I would reply, by going around between the outside of the frames and the inside of the hive, which has an open space of nearly ⅜ of an inch wide, which makes just as convenient a passage way as one would be over the top of the frames.

The entrance to most of my hives is ⅜ of an inch wide, running the whole width of the hive, and is left open in winter the same as in summer. This is all the ventilation they have. The cellar used for 11 years was 13x20, and 7 feet high, dug in dry ground. It never froze, and had no ventilation, except what was given by opening the door occasionally. The temperature was usually about 35°. What was the result? I never have lost but one colony of bees that did not starve to death, and that had been queenless so long that half the colony died before putting them into the cellar. The average number of colonies I have wintered for the past 11 years, was about 50. In the winter of 1879-80, I wintered 103 colonies, and all came out alive, and all but 3 were in good condition. Two years ago I wintered 14 colonies in a cellar 10x12x6 feet high, and lost none. In the same cellar, the year 1881, I wintered 32 colonies without loss. Although the winter of 1882 and 1883 was the coldest for years, and the temperature for weeks, in my cellar, being 12° to 15° below freezing, yet my bees wintered without loss.

I have given as briefly as possible my method of wintering bees, also the result. I have no theories to advance on the subject, nor any pet hobbies to ride; but I will just say that my opinion is that our bees would often give us very much more satisfactory results both during the honey season and in wintering, if we would just let them alone.

Ridgeway, Iowa.

* * *

For the American Bee Journal.

What Causes Bee-Diarrhœa ?

JAMES F. WOOD.

This question yet remains unanswered. Many say that dampness is the cause; others claim that it is pollen eating. I do not believe that dampness, cold or confinement causes it; and as to the pollen theory, I cannot give any facts at all. I have always wintered my bees in the cellar, without the loss of a single colony from disease, until this winter. I believe the cause of bee-diarrhœa, in many cases, is in the kind of honey that the bees have for winter stores.

In support of the above, I will first give the condition of my own bees. Last spring I removed one colony to a location about 5 miles from my home apiary, where bees gathered much more honey than in my location; but usually the bees died with diarrhœa in its worst form, in early winter. As I never had a colony suffer from the disease, I thought I could winter them on this honey, if I prepared them as I did the rest of my colonies. I moved this colony home in October, and to my surprise, before any of the colonies were put in the cellar, it and all its increase had the diarrhœa, while the others were free from the disease. I brought one of the afflicted colonies from the cellar a few days ago; the bees had nearly all left the hive, and lay dead in front of it. I shook what remained, from the combs, and on examination, found the combs perfectly dry, and very little pollen in the cells. What pollen there was, was all in the outside comb, and the honey was removed from over it; but it did not appear to have been removed. The honey was very black, and tasted much like cheap molasses.

Mr. Heddon will attribute my loss to pollen, but I shall keep this honey and give it to colonies that will not have to be moved, and I shall be very careful that it contains no pollen. I shall also take more bees to this place another season, and remove the pollen from some, and hope to get at the truth of the matter another winter. I do not think that moving bees in the fall causes disease.

To illustrate this, take the experience of W. W. Cary & Son. They are situated in a poor location for honey-producing; move a great many colonies away during the latter part of the summer and early fall, to secure stores for winter. In the fall, they are all moved home and wintered in the bee-cellar. I never heard of them losing a colony until last winter. Then they lost only two. These were away in a location where they gathered a peculiar kind of honey. I saw the hives in the spring; they were daubed with excrement, while the remainder of his apiary was free from disease. It could not have been from moving them, as a large portion of his colonies were moved at the same time.

I saw an apiary of over 100 colonies in which about half were Italians, and the rest blacks. The blacks wintered very well, while the Italians had the diarrhœa so as to seriously reduce their numbers. They were wintered in a bee-house. The Italians gathered a superior article of honey; and hence, had white honey for winter, while the blacks had black honey.

In view of these facts, it appears to me as if the kind of honey the bees have for winter, has something to do with successful wintering. I do not see how dampness had any thing to do with my colony, as the hives were dry; besides, they were diseased before winter came. How can I apply the "pollen theory" to these cases?

North Prescott, Mass.

* * *

Northeastern Kentucky Convention.

This convention was held at Covington, Ky., for the purpose of organizing a bee-keepers' association, Quite a number of bee-keepers from surrounding counties were in attendance. Mr. Peter McVean was chosen chairman, and Geo. W. Cree, secretary *pro tem.*

Upon taking the chair, Mr. McVean stated that the object of the meeting was the organization of a bee-keepers' association, the better to secure a general co-operation by which the individual members would be able to secure readily the benefit of the general experience. He was confident that the interests of those engaged in bee-culture in the northern part of Kentucky would be forwarded.

After the preliminary work of organization, the meeting adjourned till 1 o'clock.

On re-assembling, the chairman called for an expression of opinions, and a number of members discussed the best form of organization, and the most suitable plan of operation. The general drift seemed to be that the association would be highly advantageous, and all were confident in the assertion that its establishment would be permanent and popular.

It was accordingly decided to make a permanent organization, and the balloting for officers resulted as follows: President, Peter McVean; Secretary, G. W. Cree; Vice-Presidents, Rev. C. Johnson, Jacob White, A. B. Hymer, Alex. W. Stith, N. B. Wilson, W. T. Gibson, John T. Conley, C. Riggs, W. C. Phillum, W. F. Coffin.

On motion, Messrs. G. W. Cree, Alex. W. Stith and T. A. Crigler were appointed a committee for the purpose of drawing up a constitution and by-laws, to be submitted at the next meeting of the association.

In the choice of a suitable name, it was decided that the association should be called the Northeastern Kentucky Bee-Keepers' Association, and the membership fee 50 cents.

Messrs. Colonel Adie O. Robertson, W. G. Gosney and T. L. Thornton were chosen as the executive committee.

It was decided that one part of the association's programme at each meeting, should be the reading of essays, and the vice-presidents were appointed to prepare them for the next meeting.

The vice-presidents were also intrusted with the duty of calling upon the bee-keepers of their respective counties for the purpose of securing their co-operation with the association.

It was decided that the next regular meeting of the association should be on the second Wednesday in August; but in order to secure a discussion of points of special interest for that time, it was voted that an intermediate meeting should be held in Covington, on May 7. Adjourned.

For the American Bee Journal.

Pollen or Ventilation.

H. S. HACKMAN.

Has the truth been arrived at in regard to bee-diarrhœa? Is it the pollen, or the want of proper ventilation that causes the diarrhœa?

My experience leads me to think it is the want of proper ventilation. A year ago last fall I wintered 230 colonies of bees, all fair and strong ones. 105 were in two-story hives; 125 were in one-story hives; and all packed alike in leaves on the summer stands, facing the south. The two-story hives had both entrances open. By two-story, I wish to be understood as being two one-story hives setting on top of each other. Bees almost always clustered in the upper story; the lower story, in many cases, had only foundation starters, and sometimes were full of comb.

Of the 125 in the one-story hives, I lost 100 by the middle of April; while of those in the two-story hives, I lost 5; but from this date until June, 18 more in the two-story hives were lost by spring dwindling. Nearly all of the one-story hives contained frost or ice during the cold weather. This was proven by the presence of broken comb, and the water running out of the entrances when it became warm enough to thaw. The bees in these hives had diarrhœa.

The colonies in the two-story hives were free from diarrhœa, ice, moisture, and broken comb, and the bees were as bright as could be. I paid no attention to the pollen in these colonies, so there was not as much doubt in those of the one-story hives as in those of the two-story hives; and I, therefore, conclude that it was the air-space under the cluster, and the circulation of the air through the open entrances.

Two of my neighbors, the same winter, had about the same number of colonies—25 or 30 each. No. 1 had his packed in corn fodder. His hives being part frame and part box, and all one-story. He lost all except 2 colonies. No. 2 had all box-hives, and every box raised an inch from the bottom-board. Quite a number of his hives had openings in the top, from 3 to 4 inches square, and were left open all winter. His bees came through all alive and bright. Take this for what it is worth. The man who lost all but 2 colonies, told me the above, and I have no doubt but that it is true; so what do we know about wintering bees?

Peru, Illinois.

For the American Bee Journal

Capturing Queens.

W. H. STEWART.

On page 103, Rev. P. W. Archer claims to be able, by locating himself beside a colony of bees, within a few minutes, to cause the queen to come out and allow herself to be captured.

When I first read the statement, I was inclined to doubt its truthfulness; but after thinking the matter over, I believe that I understand the manner, or at least one way, in which it can be performed.

Perhaps it may be done at any time during warm weather; but I doubt whether it could be successfully performed at any time, except during the swarming season. It is well known to all close observing bee-keepers, that when a plurality of queens is hatching in the hive, the queens will, at twilight, utter several monotonous sounds, very much like the sounds produced by the mason-wasps while building their mud nests. This noise made by the queens, is believed by most bee-keepers to be a challenge for the deadly combat that often ends in the destruction of all the queens in the colony except one.

If I am not badly mistaken, one could seat himself near the entrance of the hive containing a strong colony, in this climate during the months of June and July, and (with the queen-mocker that I to-day send you, to be placed in your museum) produce an imitation of the piping of the queen; thus causing her to believe that a rival queen is near the entrance, challenging her to combat. I think when she hears the challenge, she would present herself at the entrance for the purpose of fighting; and while under the excitement, could be captured.

If the queen-mocker can be made to work well, it will be very useful while moving brood-combs with adhering bees, from strong colonies, for the purpose of using them to build up those that are weak; or, in other words, building up nuclei.

It is sometimes quite a task to hunt up a queen while doing this work, as the colony from which we wish to take the brood-combs are very populous; and it is desirable to know just where the queen is, in order that we may be sure that we do not carry her to the nuclei, with the other bees adhering to the brood-comb.

Whether the plan that I propose is the same as that practiced by Mr. Archer or not, we are indebted to him for the idea of thus getting at the queen. We may, however, find by practice that any plan will end in disaster. I have thought that, perhaps, a queen thus enraged would be balled or killed upon returning to the colony in that excited condition.

Orion, Wis

For the American Bee Journal.

Honey Fermenting.

R. R. MURPHY.

I see a great deal in the BEE JOURNAL about the pollen theory, the humidity theory, the poor honey theory, and a great many other theories to account for the loss of the bees in winter.

My experience has been, if I could keep the moisture out of the hives, and had a good strong race that bred young bees until late in the season, and if the honey was all right, there was not much trouble. I think one of the greatest troubles, or, at least it has been in this section, where otherwise cared for, has been in the honey, and that, generally, in the early honey. For this section I would rather chance the late honey for wintering than the clover and basswood honey; for the reason that the early honey in the body of the hive, and occasionally the surplus honey, if left in the hive too long, seems to ferment the same as good yeast will. I have had a piece as much as 3 inches square of the caps of the cells, tear loose from the cells in a body and raise up ⅛ of an inch or more in the centre from the cells; and the space beneath, on top of the honey, full of small air bubbles; and colonies with such honey invariably wintered poorly, or died during the winter, according to the amount of such honey in the hive.

I cannot give any reason for the honey apparently fermenting (as it does not sour). Whether it is bacteria or fungi that causes it, or not either, I am unable to say; but I have found that when I discovered any of it in a colony, if I would extract it and let them fill up on late honey, they were all right for the winter; and I found by experimenting, that if the old bees were fed on this honey in the fall, after the honey season is over, they would begin to die off and dwindle the same as spring dwindling. I have thought many times that spring dwindling was caused by this kind of honey, even when it had not developed enough to show it to the naked eye.

There has been more or less of this kind of honey in some of my hives nearly every year since 1871 or 1872, and it was thought by some of the bee-keepers of Kentucky and Tennessee, about that time, that this kind of honey was the cause of such heavy losses in those States from 1867 to 1869. If my memory serves me right, there was said to be whole apiaries where the bees had deserted their hives and left them full of honey.

Gen. Adair, of Kentucky, was the first one I ever talked with that called my attention to this kind of honey as being injurious to bees. I think it was in the year 1869 or 1870, that I met him, and we talked about the losses of Kentucky bee-keepers; and he told me that whatever it was that caused it, he had not been able to control it, and that the malady was traveling northward gradually, and that if it got as far north as where I lived, that with our long cold winters, it would destroy our apiaries if it was as bad as it was with them. He had a sample of the honey with him, showing how it looked; and the next week, when I reached home, I examined my colonies, but found nothing of it then, and did not for three years afterward.

It first shows itself by the caps of the cells here and there being convex instead of concave; and as the disease, or whatever it may be called, progresses, there are more cells affected, and the cappings of the first ones begin to possess yellowish tinge; and honey that a few days before was of a heavy body, is, after being affected, rather thin and watery. Immediately under the cappings are fine air bubbles.

If none of the bee-keepers recognize the disease, or whatever it may be, if I find any of it this coming season, I will send a sample to the editor of the Bee Journal, if I do not forget it. I did not find any of it the past season, and but little the year before; but the two seasons before that there was plenty of it in my yard.

Garden Plains, Ill.

For the American Bee Journal.

Stimulative Spring Feeding.

W. J. DAVIS.

I have read with care and much interest the able article on "Spring Management of the Apiary," by Mr. Allen Pringle, in No. 13.

He advocates the feeding of substitutes for natural pollen, in early spring, and I have no doubt that for his latitude he is right; but for *this* locality, I am forced by actual experience to consider the practice of doubtful utility. I have often thought that there is no legitimate pursuit of man, that demands the exercise of more discretion and good common-sense, than that of bee-keeping; nor is there any class of men, to whom prescience should be given, to say, "What will the morrow be," more than to bee-keepers.

To those of limited experience, many of the articles in the Bee Journal appear very contradictory; but it should be remembered that this Journal is Continental in its character. While in one part of its heritage, the bees are closely clustered and packed in cellars and wintering houses, or snugly tucked under warm blankets, in other parts honey and pollen are coming in rapidly. and drones are on the wing. Hence, the locality of each writer should be carefully considered; while the honey-bee of low or high northern latitudes may be the same, and its instincts the same, its management will of necessity be very different in many respects. That is to say, the management of bees must vary to suit the climate, or kind of weather that prevails in any locality. With this introduction, I will proceed to give an index of our spring weather, and my experience in stimulative feeding.

Our bees generally have a cleansing flight about the middle of February. They are then re-housed for about 4 weeks. For several years I have supplied them with unbolted rye meal, thoroughly cleaned and ground finely, or wheat flour mixed with bran or corn meal. This I fed by placing in clean barrels in a warm, sheltered place on the south side of a building, placing from 2 to 3 pecks of meal in each barrel, and inclined them toward the sun at an angle that would not allow the bees to blow out the bran with their wings; and as they would work out the flour, roll the barrels about ¼ over, and the bran would slide down and give the bees a chance to cull the finest parts, which they readily work into nice pellets on their thighs, and go home rejoicing.

If there is anything worker bees delight in, it is feeding their babies. A strong mark of their feminine character. We see in this the wisdom of Him who created all things. Had the workers been males, there would have been more failures in the bee business than there is, provided the same number engaged in it.

Now for the result. The taking in of pollen stimulates to breeding, just as we expected and desired, and from the middle to the last of April the bees have about as much sealed brood in their combs as they can cover when the weather is mild; then a "cold wave" comes along; the wind blows cold, and it freezes. I have known it so cold here in the middle of April, that blue birds were frozen to death. Where are our bees? The cells within the cluster are all occupied with brood. The vitality of the old bees is severely taxed in producing the brood. Not an empty cell in which an adult bee may enter to get warm. They are of necessity spread in thin layers between the combs. By physical exertion they do all they can to resist the cold. They strive to keep themselves and their brood warm. But there is a limit to their endurance; the cold continues for about 3 days; for 2 days of which time the bees will be dropping to the bottom-board, half of the old bees be dead, and a large amount of the brood chilled beyond recovery. How much have we gained?

Another item of my experience may not be without interest. Several years ago I read in the Bee Journal a suggestion of a British bee-keeper, to stimulate breeding even before the bees were able to fly, by mixing flour and honey in the form of paste, and pressing it into the combs. I tried it on 3 colonies. They did start a large brood, but the result was far from being satisfactory. The first of June found them the poorest colonies in my yard.

One year ago I fed rye meal as usual, and I observed 2 colonies that worked with greater zeal than any of the others. I was pleased with their conduct; but in May there was a greater mortality of old bees in those two, than in any of my other colonies; and in their summer's work, they fell below most of the others. In this locality a large supply of pollen is usually secured from the blossoms of the soft maple, which bloom from the 20th to the last of April. I am going to wait for natural pollen this year, and if I make a mistake by so doing, I will frankly acknowledge it. In higher northern latitudes, spring may not throw out her promises so early, but when it comes, it comes to stay. The days lengthen with greater rapidity; and, hence, are not liable to the backsets of this latitude. Therefore, stimulative feeding may be an advantage in Mr. Pringle's locality; but to resist cold, bees must have empty combs to cluster in, whether it be in December or April.

Our 122 colonies have wintered without loss, and in fine condition. We are looking with all our old enthusiasm for a good honey season.

Youngsville, Pa.

For the American Bee Journal.

Surplus Arrangements.

WM. M. BARNES.

A great deal has been said on this subject to the end that a standard shall be fixed for hives and honey-racks, for the easy and successful manipulation of bees. We all have our choice so far as what already exists in the line of inventions pertaining to the above subject will allow. I will describe the surplus arrangement I use, so the more experienced honey-producers will have a chance to point out my errors.

I take a board ¼ of an inch thick, and just as large as the top of the hive. Across the ends nail cleats ¾x2 inches; then nail this board to the top of the hive, so that the cleats will be above the top. Draw a line lengthwise in the middle of the board; then 3 inches on either side of this line will be the centre of a row of slot holes cut crosswise of the board 2 inches long and ⅜ of an inch wide, and measuring 1¾ inches from the centre, measuring lengthwise of the board. This is then the bottom of the rack.

The separators I use are made of basswood, 6x12½x3-16 inches, with insets ½x2 inches cut in both edges the same distance from the middle, so as to just match the holes in the board. Then directly between these insets, I bore in each end one ¾ inch hole; this completes the separators.

My sections are 6x6x1¾ inches, and the same width all around. To set these up, I have glass cut just the size of the separators. I then put one glass on its edge against the cleats across the board; then put on 2 sections against the glass, and then more glass and more sections, until full; wedging them tightly inside of the last cleat. They can be tiered up if desired.

I find by actual experiment, that my sections of honey are freer of propolis with the use of this rack than they are with any other. I can easily take hold of them, as it is impossible for the bees to touch the edge only where the insets are in the separators; and the holes in the separators allow the bees passage ways from one section to another.

I do not see any detriment to the appearance of the honey, arising from these holes; but it is the cause of quite an ornament being built on the surface of each comb in the shape of a little mound. I have never had a section of honey that could not be placed by either side of any other section, and yet the honey not come in contact.

Boaz, Wisconsin.

For the American Bee Journal.

Clipping the Queen's Wing.

DR. I. S. M'ALLISTER.

Mr. Stewart, on page 576 of the BEE JOURNAL for 1883, after leading the reader along, wishes some bee-keeper to answer his question; and says that all will agree with him, that a mother cannot transmit to her off-spring that which she does not possess. I do not agree with him on this point, and would as soon have queens from the one as the other (all things being equal); for I have been in the medical profession for over 23 years, and have had occasion to perform and witness many amputations of limbs, and never saw any offspring from said parents, that was minus any limb; or, that seemed at all affected thereby. I have watched the progeny of queens, whose wings have been clipped, and I fail to see any difference from those bees that their mother did not have her wing clipped; and on several occasions, I have clipped a wing so close to the body, that the queen would curl down close to the comb, and show signs of pain for a moment; then go quietly about her business as though nothing had happened.

Of course such close clipping was an accident; as there is no need of clipping more than one-third of one wing. I think the comparisons are not parallel; for it is not supposed that a queen has occasion even to leave the hive, after she has once mated, except in swarming; and I doubt very much whether it would improve her generative powers, to have her tossed up and compelled to fly; though it would be likely to interrupt her laying ability, besides the risk of otherwise injuring her.

They are apt to be altogether too handy with their wings; and it is no pleasant thing to have a valuable queen and a large swarm of bees abscond, just for the simple neglect to clip a wing. It has been proven by years of practical experiments by many able bee-keepers, that it is in no way detrimental to the well-being of the bees; and it saves the loss of many a valuable swarm. Years ago, I, too, was opposed to the plan, but now it is only a piece of carelessness with me if I fail to clip a queen's wing, after she is mated and has commenced to lay.

As far as hybrids are concerned, if they could be made a fixed type, they might be improved; but as it is, I fear it will be difficult to send for pure stock before long, as there are so many bees "bred for business." I prefer to keep my stock of Italians pure.

Columbus, Neb.

For the American Bee Journal.

The Use of Comb Foundation.

E. P. GIBBS.

On page 25, Mr. J. V. Caldwell takes up the subject discussed by Mr. Doolittle in regard to the necessity and profit of using comb foundation. I am glad to see this question agitated; for I have been a heavy consumer of foundation, and for the past two years, I have been of the opinion that it was made unnecessarily heavy for use in the brood-chambers.

The past season has caused some doubts in my mind as to the utility of using foundation in the brood-chamber for any other purpose than as a starter in the frames. My observation is, that a great many of the thick sheets of wax are not drawn out at all, but simply built upon; and I believe that the 10 sheets of foundation ordinarily put into a brood-chamber, weighs three times as much as ten frames of new empty comb. The greater part of last season the price of foundation was about 65 cents. Now, nearly four sheets of common-weight foundation for Langstroth frames, make a pound. Hence, to fill a 10-frame hive, it requires 2½ pounds; and at 65 cents per pound, would cost $1.62½ instead of 75 cents, as Mr. C. says.

Mr. C. says we cannot get a hive full of worker comb if we do not use foundation. That is true. Neither can we if we do use it. He says further, if we do not give them drone foundation, how can they get drone comb? If they have no drone comb, and want some, they will build drone cells on the worker foundation. In my earlier days of bee-keeping, I used to cut out the drone-brood and throw it away; but the bees would just as often rebuild it. I finally came to the conclusion that it was wasting too much of their time to build drone comb for me to throw away.

I do not wish to be understood that I prefer a brood-chamber with ½ or ⅓ drone comb; but they *will* have some any way. I have combs made on foundation that have not a worker cell in them, but all drone cells. I am not prepared to say that it is best to entirely discard foundation in the brood-chamber, but I am satisfied that it is made twice as heavy as need be; and that every consumer should insist on a much lighter weight per foot, or make his own.

Lyndon, Ill.

For the American Bee Journal.

Success in Wintering for 21 Years.

IRA BARBER.

By all the methods except one, that I wintered bees, I could not bring 50 per cent. of them through the winter in as good condition as when placed into winter quarters. That one was by burying them in trenches in a light gravelly soil, entirely below the surface, and covering them about 10 inches deep with the same. In this way, nearly all came out as strong as when put in.

I tried burying them in clamps above the ground, but sustained heavy losses. I built a house in which to winter them, but this proved too cold for them, and was abandoned after using it for two winters. In all the cold rooms in which I have wintered bees, diarrhœa appeared; the worst case destroying ¾ of all my apiary.

During all this time I had a good cellar, but it was wet, and I was afraid to risk my bees in it, for it was generally believed that bees would not do well in damp cellars. Having 130 colonies, I concluded to chance them, thinking they could do but little worse than heretofore.

About Nov. 15, I placed my bees in that cellar, keeping a close watch of their condition. One-third of the hives were provided with chaff cushions, and the rest were ventilated at the top by raising the top board. In the spring all were alive, but in only fair condition. After three winters of experimenting, I found that those which were ventilated at the top of the hive were in much the best condition; I might say that they were just as strong as when put in for the winter. By thus wintering them I have had no trouble since.

I do not think it is necessary to keep the temperature in the cellars as high as 65° to 90° above zero; but I know that bees will stand that degree of heat and come out all right, with my way of preparing them. My hives are 12x19½ inches, inside measure, and 12½ inches high, with two entrances, one at the bottom and the other in the centre of the front end. For coverings, I use felt and burlap, putting them on when I take off the sections. I also use a top-board 1 inch thick; the bees having all the fall to glue them fast. I pile them up in the cellar in columns of 4 or 5 high, very closely together. The lower tier rests on caps taken from the hives, and are raised ½ inch from the bottom to prevent molding, and all are left with entrances open.

For ventilating the cellar, I use a 3-inch pipe 24 feet long, which enters the cellar window and extends up on the outside. My cellar is 17x19 feet, and 7 feet high, and contains 225 colonies, they furnishing all the heat. In November the mercury stood 12° above zero on the outside, and 65° above on the inside. In April it stood 60° outside, and 90° inside. Bees cannot be wintered in a very dry cellar at so high a temperature.

The walls of the cellar are made of stone and mortar, and are 2 feet thick. I never open it from the outside from the time the bees are put in until taken out. I do not see that bees breed any more in a warm, damp cellar than they do in a cool, dry one. The old colony of bees I purchased of Mr. M. Quinby in 1863, is still alive, and has been wintered all these years in a warm, damp cellar.

I have never used a subsoil cooler, but intend to put one in sometime, just to cool off the bees when I set them out. I would not ask for bees to winter better than they have on the foregoing plan for 21 years, for I find them uncomfortably lively when putting them out.

De Kalb Junction, N. Y.

For the American Bee Journal.

The Improved Section Case.

E. P. CHURCHILL.

The article by Mr. G. F. Williams, on page 39, agrees with views that I have entertained for sometime. I was glad, indeed, to learn that others see some of the difficulties of rapid work of bees in the sections.

I have always used Root's Case, and I think it combines many good features; but as they are made, the outside sections are so near the glass that the bees must pass up between them and the next tier of sections; and as there is only ½ bee-space at the outside, or next to the glass, the comb must be shortened just ½ bee-space, and the bees must have holes through the combs in order to get through.

This trouble has bothered me about as much as it has the bees, I think; but after studying over the matter, I have finally overcome the difficulty, to my satisfaction, as well as to the satisfaction of others.

As the Root Case is made to hold 28 sections, 1⅞ inches wide, there is a little play between all of them, so as to allow them to be closed up about ⅜ inches. I tack strips up and down across the glass stays, so they rest against the edges of the sections. These strips are ⅛ of an inch thick, and ⅜ of an inch wide. I place the section rests so as to agree with the sections, and nail them there to remain. I use no spaces nor strips across the rests to be glued down by the bees. The Cases can be made one row of sections shorter, and I think they would be advisable, as they can be made as narrow and as short as one may desire.

I have always believed that the boxes were too wide, so I have been making some only 1 inch for top and bottom, with ends about ⅜ of an inch wider. I think, as they are so much like natural comb as to thickness, the bees will like them much better. Of course they will not weigh a pound, but I have no fears but that they will sell.

I have gone a little farther and made sections of the same thickness, and depth 4¼x5½ inches long, to hold a pound. This size gives more room for bees in a clump, and 3 lengths fill the common crate, by using a ¼ inch strip at the ends. On the lower edge of these I nail strips of tin just wide enough, so the ends of the boxes can rest on them; thus doing away with the wood rest the whole length of the boxes; and also the killing of so many bees when removing and replacing the boxes.

I allow ⅜ of an inch space between the bottom of the sections and the frame, because where they rest on the frames, they are gummed down, and with a ⅜ inch space, they are only waxed. I know it takes some wax; but it takes some lives of bees to set a crate right down on the frames. The queen is more likely to enter the sections where there is no space; but if one desires them to rest on the frames, he can leave off the rim or edge of the case, and down they go. In fact, this crate can be made almost any size; and as there are partitions between each tier of boxes, we can leave out one set, and cover their places with cloths, etc., and the remaining boxes will stay in place. Of course the strips are used at the outside as with the wide sections, which offers a nice free passage way for the bees, and right where they are most needed.

I am satisfied we all have lost by allowing only this seemingly trifling thing to pass without a remedy; and I also believe we have more crooked combs in the sections by allowing too many at once, than from any other cause. Why? Because where there are more sections than the bees can fill plumb full, they take the centre first; and where one side of the foundation is drawn at a time, it is nearly always crooked; but if we use just what they can fill and work out altogether, we have a nice straight lot of comb, if the foundation was properly set and left straight, from our own hands.

I shall use no more hives without a firm strip of woolen cloth between the two stories, tacked on the upper one with a heavy coat of new paint first; then they are hasped together, and the bees will not leave the outside sections nearly so much as otherwise. And when we lift a hive, it will not fall apart, nor will the upper story rise up when we press down a cushion.

I make the cases with a roof, and pack with hay, and tack on burlap; then these are hasped to the upper story. I have a ventilator at each end of the case. I believe the packing cools in hot weather, and warms in cold. It also presses the enameled cloth down smoothly on the frames, when in the upper story, and, in short, it is just complete.

As I have no patent on this, I have no ax to grind; but I am interested in improvements in bee-keeping. I can get double the extracted honey that I can of comb, but many will have box honey. It seems strange that any one chooses to let it remain in the hive till capped before extracting, because it causes the bees just so much waste to cap it to be cut off so soon. I choose to extract it soon after it is gathered, and do the evaporating myself, and put on caps if I wish. In many things, it is good that we do not think alike; but we ought to agree that bees cannot work in a ⅛ inch space and do a fair job.

Auburn, Maine.

Read at the Ohio Convention.

Spring Management of Bees.

DR. H. BESSE.

I use a one-story hive similar to the Langstroth, and I use 9 Langstroth frames in each. Usually, about the first week in March, I put my bees on the summer stands, after which I clean out all the dead bees and close the entrances to within an inch, and examine thoroughly as to stores, and if such are about exhausted, I feed them at once by putting a comb of honey as near to the cluster as possible; or, if I have no comb honey, I fill an empty comb with sugar syrup and give it to them. They should have enough feed at this time to last until about April; and after this all colonies, whether they have enough to carry them through to fruit bloom or not, should be fed a little every day to stimulate the queen.

Early in May, every hive should be full of bees and brood, in order to get the best results both in honey and increase. If some colonies are yet weak, I give them 2 or 3 frames of hatching brood; giving the strong colonies empty combs, or foundation in their place.

I am ready, as soon as the honey flow commences, to put on honey-racks filled with one-pound sections; or, if for extracted honey, upper stories. These I have full of empty combs, which have been selected from colonies that have much drone comb and old combs that are unfit for brood-rearing. I also put one frame of brood in the upper story; this causes the bees to work there at once.

For increase, I set apart about ⅓ of my best colonies, and from these I select 2 or 3 for queen-rearing, and a like number for drone rearing. This I do about the middle of May, as I believe that nothing is gained by commencing this too soon; as colonies are weakened, brood chilled, and the young queens reared are more frail and less prolific than those reared after warm weather is fully established.

The first step in rearing queens, is to select a last year's light-colored worker comb, and put it in the centre of the colony that I wish to breed from. In 3 or 4 days this comb is usually filled with eggs; the oldest of which is beginning to hatch into larvæ. Then remove the queen and the brood from some strong colony, shaking the bees from the brood-combs back into the hive, and divide the brood among weak colonies; the old queen can be given to a queenless colony, sold, or given to a nucleus, prepared on purpose for her. This comb of larvæ, from the choice queen, is given to the queenless colony prepared for it. Some recommend trimming off the lower edge of the comb to where the eggs are beginning to hatch, or cutting a few holes into it in different places, so as to give the bees a better opportunity for building queen-cells.

I mark the date upon a slate, which I have hanging on each of my hives, thus knowing when the cells are ready for use. This date should also be written in a memorandum book kept for the purpose, and which should be consulted each day. All hives should be numbered, and their numbers recorded, with any facts about them you wish to remember. By strictly following this rule, your queen-cells will not be forgotten and neglected until one of the queens is hatched and has destroyed all of the queen-cells and unhatched queens.

From 9 to 10 days is the proper time for removing cells thus prepared; and at the time marking it on the slate. I usually leave in the hive one cell or more if they cannot well be separated. These cells should be handled with care, so as not to injure them. After removing the comb of eggs from the selected queen, it should be replaced by another comb, and in about three days this will be filled with eggs, and can be given to another queenless colony. We should not allow a colony to build more than 1 or 2 lots of queen-cells; after which it should be given a laying queen.

A day or two before I expect the first lot of cells to hatch, I divide as many colonies as there are cells, by taking out about 3 or 4 combs with brood, examining them carefully so as not to get the the queen; then I put these into an empty hive, removing the part containing the queen into a new place, and putting the new hive on the old stand. This should be done in the middle of the day, while the bees are busy at work. In a day or two I take out one of these combs and engraft a queen-cell, which is nearly ready to hatch; then in 6 or 8 days I examine the new colony, and if I find eggs, I know they are all right; if not, I give them a laying queen or another queen-cell. This method does not apply to those who rear queens to sell; they form smaller nuclei, or give a mature queen-cell. It is very convenient to have queen-cells ready, or, nuclei with laying queens.

About the time I make the first arrangements for starting queen-cells, I select 1 or 2 of the best colonies for drone rearing. Select a comb filled with drone cells, remove one of the outside frames, spread the combs apart, and insert the new comb in the centre of the cluster: feeding these colonies a little every day to stimulate the queens, also feeding those colonies which are to rear queen-cells.

Introducing queens is an important item to those who buy them for a good price. G. M. Doolittle says: "I always liberate a choice queen, as late in the evening as I can see to do it. A queen can be quietly dropped into a prepared colony with but little danger, if put in so late that the bees cannot see to fly, and so quietly as not to arouse them." He further says: "I used to do it by a round wire cage, with a plug at each end, a string tied to each plug, and the ends of the string brought out from under the quilt cover; then pull the strings gently till something separated." This process, I think, would be the safest, providing the cage is left under the quilt from 24 to 48 hours, and then operated as described, after dark.

The apiarist should watch the bees, and give all necessary care at the proper time. The successful apiarist will always have his apiary in a neat condition, with "a place for everything, and everything in its place."

Delaware, Ohio.

* * *

For the American Bee Journal.

Shade for Bee Hives.

M. BRAY.

When I said by having my bees well shaded (page 441 of 1883), I did not intend to convey the idea that the bees of J. D. Enas had suffered from lack of being properly shaded. What I meant by being well shaded, was that I was giving them more shade than usual. I use Langstroth hives; they front to the east; my shade-boards are 2x3 feet; I place them a little to the front, and a little to the north; then set 3-foot stakes about 2 feet from the hive, leaning against it along the south side and across the west end. This kept the sun off the hive and ground near it. This extra shading saved my bees, but when the mercury gets up to fever heat, as Mr. Enas says, shade does but little good, for the wind blows as hot as if it came from a fire.

I use a double-walled hive, and think it will prevent injury from heat. It produces a draft between the brood-chamber and the outer case, taken from an underground pipe made of lumber. I have conductors made of lumber one inch square, inside measuse, that connect with holes bored through the box under ground, and holes bored through the bottom-board of the hive. I have two of these conductors to a hive, one at each corner of the back part of the hive. The space between the brood chamber and outer case should be 2 inches at the back, to give room for holes to connect with the pipe below. The cover is made something like the cover of a trunk, with a 1½ inch hole bored through the front, and wire cloth nailed on for ventilating.

I drive two pickets for the front of the hive to rest on, which gives the hive the appearance of resting on 4 short posts. The head of the pipe should be laid about level with the top of the brood-chamber. This gives a constant draft of cool air, and the warmer the day the stronger the draft. The brood-chamber and outer case are not fastened to the bottom-board. Nail small blocks to keep them in place. I would not dare to trust to a dead-air space, as this would confine the heat generated in the brood-chamber. Besides preventing over-heating, this hive is as near a robber-proof hive as it can be made.

New Almaden, Cal.

Local Convention Directory.

1884. *Time and place of Meeting.*

April 24.—Union Ky., at Eminence, Ky.
G. W. Demaree, Sec.

April 24.—Eastern Ind., at Richmond, Ind.
M. G. Reynolds, Sec.

April 24.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

April 24.—Western Michigan, at Berlin.
F. S. Covey, Sec.

April 24, 25.—Western, at Independence, Mo.
C. M. Crandall, Sec.

April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.

May 3.—Pike Co., at Pittsfield, Ill.
T. C. Bunker, Sec.

May 3.—Progressive, at Bedford, O.
J. R. Reed, Sec.

May 6.—Tippecanoe Co., at Lafayette, Ind.
Mrs. Jas. L. Havens, Sec.

May 6.—Cattaraugus Co. N.Y., at Randolph, N.Y.
W. A. Shewman.

May 6.—Southern Wisconsin, at Janesville.
J. T. Pomeroy, Sec.

May 15.—Tuscarawas Co. O., at Port Washington, O.
A. A. Fradenburg.

May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Bees in California.

My apiary of 200 colonies produced 14,000 pounds of honey during the last season, principally from blue sage. The coming season I intend locating an apiary of 100 colonies in the north part of San Diego county. I find a great many small apiaries along the coast range of mountains, badly managed. Some of the queens are from 3 to 5 years old. I think if the Bee Journal could be placed in those apiaries, they would soon present a brighter aspect. Joseph Sayler.

Pleito, California.

Bees in Missouri.

One month has passed since I moved my bees from the cellar, to let them have a cleansing flight, which they needed very much. Some of them had diarrhœa badly, and I was glad when good weather came, so as to move them out-of-doors. The weather has continued fair up to this date. Out of 60 colonies, I lost 1; 20 had diarrhœa. Those which were affected with diarrhœa, were mostly of those I had built up from nuclei, and had only fall honey in their hives, and plenty of pollen. From those that had diarrhœa, I removed the honey last summer. After taking them from the cellar, I found that one colony had nothing but pollen in the combs, and not a drop of honey. I removed the combs that were the most besmeared, and gave them three frames partly filled with honey, which brought them out all right, and they are now doing well. Of the other infected colonies, there has, up to this time, 6 swarmed out and joined other colonies. I fear that I will lose several more, as many are so weak and dwindled down, that they can hardly hold out much longer, and soon will have to give up the battle. I have wintered 14 colonies out-of-doors on the summer stands; 9 packed in chaff, and 3 without any protection; they all came through the winter in good condition. Two colonies I had covered up with ground, only leaving the front open, and they wintered the best of all; one of them had drones flying to-day. Experience teaches me that colonies from which honey is removed during the summer, will have diarrhœa; while those worked for comb honey show no signs whatever, and are strong and healthy.

JOHN NEBEL.
High Hill, Mo., April 14, 1884.

The Weather and Bees.

The weather has been cloudy and cold for the past ten days. With only a few exceptions, bees have been confined during that time. It is still cloudy, and the indications are that we will have some snow. Bees are getting short of stores.

C. THEILMANN.
Theilmanton, Minn., April 15, 1884.

My Affliction, etc.

I have been compelled to neglect my correspondents on account of my suffering with an unfortunate eye, and finally submitting to the removal of the lens. The operation was painful but short, and my progress towards recovery is exceptionally good. My confinement in a dark room for almost two weeks was a greater torture to me than the operation itself. In a week from this date I hope to be myself once more. My bees seem to have wintered better than usual. From reports, I judge that a larger interest than ever will be manifested by bee-keepers the coming season.

CHAS. F. MUTH.
Cincinnati, O., April 12, 1884.

Bees Confined 149 Days.

I believe that bee-diarrhœa is caused by dampness in the hive; and that dampness is produced by the breath of the bees and damp air collecting on the combs. What is found in the intestines of the bee after death by diarrhœa? We find ¼ part pollen, and ¾ parts water. I think if the inside of the hive be kept dry, there would be no bee-diarrhœa. The bees become damp and cannot fly, and death is the result. Was there ever a colony lost by diarrhœa, when the combs and hive were dry? My bees were put into the cellar Oct. 26, and taken out March 25, being confined 149 days. I found 4 dead colonies; 1 starved, having no honey but plenty of pollen; 3 that had diarrhœa were wet and moldy. The hives had been near the bottom of the cellar, and the cap fitted tightly. Sixty colonies came out in fine condition; but they are light in honey. I have never had bees eat so much honey in the cellar as was eaten during the past winter. One wintered out-of-doors came through nicely; it was a Syrian colony, and the hive is full of bees. They endured 40° below zero. Syrians are always on the alert, and a robber-bee stands no show if it makes an appearance at the entrance of the hive. When the Syrians will not produce 75 pounds of honey per colony, spring count, I will try some other race of bees. Location has something to do with the yield of honey; it is not all in the race of bees.

Cokato, Minn. FAYETTE LEE.

Valuable Instruction.

The books, "Bees and Honey," and Prof. Cook's Manual, I have studied very carefully, and find both of them invaluable to bee-keepers. The BEE JOURNAL is indispensable to any enterprising bee-keeper. Every number contains one or more articles that are worth as much, or more than the subscription price for one year. Leaflet No. 1, and "'Honey as Food and Medicine," are just what is wanted.

C. E. CANNADAY.
West Berne, N. Y., April 12, 1884.

Winter Losses Slight.

Bees in this section are in good condition. The winter loss is but slight, compared to some years. I did not lose a colony, and I am feeding but one, which was left unpacked as a test. All were on the summer stands, packed with chaff and dry leaves.

H. D. CUTTING.
Clinton, Mich., April 14, 1884.

Still Cold in the Pineries.

After 159 days confinement, I took my 108 colonies out of the cellar, and found 100 live ones. Three had starved, 3 had lost their queens, and 2 died with diarrhœa. The ice has not yet thawed in the bay, and the ground is covered with snow. It looks pretty gloomy for a specialist in bee-keeping this far north. C. CASE.
Petoskey, Mich., April 17, 1884.

Pollen and Fermented Honey.

On opening one hive about the middle of January, I was struck by the peculiar condition of one of the frames. The caps were bursted off of about one-half of the cells, and a yellowish substance protruding from them. I removed the frame and carried it to a neighboring bee-beeper, where we examined it together. We found it to be pollen and honey fermented; which, acting the same as anything else in the same condition, generated gas which probably bursted the caps off the cells. Now, why was the honey and pollen in the same cell? A bee-keeper tells me the honey was put over the pollen to keep it moist. I claim the bees were crowded for space to store their honey, and so placed it over the pollen; and, consequently I am ridiculed, but still I hold the same opinion. If bees placed honey over pollen to keep the latter moist, why would they leave ⅔ or ¾ of it uncapped? If it preserves ⅓ of it, the bees surely ought to know that it would also keep the other ⅔. We all know the use of any liquor in a state of fermentation, is very little to give the person the dysentery who uses it; and is it not reasonable to suppose that honey and pollen, in a state of fermentation, would do the same thing with bees? This is no fancy sketch, but facts as I saw them.

FRED C. HATHAWAY.
Portland, Mich., April 16, 1884.

Bees in Nebraska.

My bees are in the cellar yet. I think they have wintered all right, and are now beginning to wake up to a sense of their duty. I will have to set them out before long. We are having a very wet, backward spring, but everything works for the best.

G. W. STARK.
Holmesville, Neb., April 11, 1884.

Moving Bees on the Railroad.

I moved 29 colonies of bees March 10, from Illinois to Iowa. The weather was so cold, and so much snow on the ground when I arrived, that I could not put them out. Ten colonies starved; the remainder are in good condition. DAVID WATTERSON.
Benzette, Iowa, April 6, 1884.

Poor Honey a Cause of Disease.

Out of 66 colonies put up for the winter, 11 died of diarrhœa. I think poor honey was the cause of it. They were last year's swarms, and did not work in the sections. Those that did work in the sections are in fine condition; have plenty of honey and bees. Those that died had from 16 to 30 lbs. of honey left; about ⅓ down from the top was white clover honey; the rest was of a pinkish color. The bees that stored the poor honey in the sections are all living, while those that stored late honey below and had to eat it first, are all dead. On Oct. 7 a swarm of black bees came to my yard. I hived them in a box, captured the queen, and put the rest of the bees with a nucleus of Cyprians that had a young queen. I fed these about 12 lbs. of the best white sugar, and now they are doing nicely; of those that died, 9 were Italians and 2 blacks. I wintered my bees on the summer stands in Simplicity - Langstroth hives. We had very cold weather the past winter, 30° below zero at one time; but the cold weather in March was the most detrimental to the bees.

Casey, Ills. D. R. ROSEBROUGH.

Fruit Bloom is Backward.

The weather is cold and the spring is backward. Bees have dwindled badly. Loss, 25 per cent.; cause, dysentery, resulting from poor honey, gathered mostly from honey dew and from yellow willow, late in the fall. White clover looks promising; fruit bloom is backward.

S. COULTHARD.
Preston, O., April 15, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Questions by a Beginner.

I bought a colony of bees in December; moved them a mile in a lumber wagon. February 19, shipped them on an emigrant train, and then hauled them 5 miles, on a load of goods, over rough roads. They have been out all winter, and are in fine condition; also, are at work every favorable day. They are in a Langstroth hive.

1. When is the time to put on sections?
2. About what time, generally, do bees swarm?
3. Can I do without a smoker?
4. How long after a swarm is hived, do you put on sections, if at all?

J. N. CAST.

Lincoln, Neb., March 6, 1884.

ANSWERS.—1. When the bees begin to build bits of comb about the tops of the frames.

2. Bees usually swarm from 1 to 3 weeks after the building of new bits of comb.

3. If you have plenty of tact, you can do without a smoker; but it will pay you better to purchase one, even with one colony.

4. If the swarm is hived on full sheets of foundation in the brood-chamber, and is a large one, you can put the sections on at the time of hiving; otherwise from 5 to 10 days afterward.

Italianizing.

Will Mr. Heddon, in "What and How," please answer the following: What would be his method of getting Italian queens in colonies in box hives which are to be transferred in fruit bloom, so as to get all the benefit possible from the Italian colony this season? I practice transferring without drumming out. W. G. FISH.

Ithaca, N. Y.

ANSWER.—My method would be to purchase untested queens, and place one at the head of each colony, after destroying the black queen, at the time I did the transferring.

Losses of Bees in Winter.

The past winter has been very hurtful to the bee interests in this section. As far as I can learn every person in this vicinity has lost all, or nearly all of their bees. Those wintering in bee houses faring alike with those wintering on the summer stands. Out of 100 colonies on the summer stands, I have only 9 remaining; 80 colonies were in the Fisher chaff-hive, which contained the remnant left alive; 20 colonies in the Heddon hive, all died. As I cannot use all of my old hives and combs, this summer, can I keep them free from moths until another year, the comb all being built since 1880? Bees did very poorly here last year; storing very little surplus honey. They did not pay expenses, the season being so wet and cold. Cold and dysentery, I think, caused our losses. We miss our little pets very much, and shall try and retrieve our losses.

WM. SHIER.

Marlette, Mich., April 10, 1884.

ANSWER.—You can keep your comb over another year by boxing them absolutely moth-tight, provided they have been exposed to a temperature as low as 14° above zero; if not, I would fumigate them with sulphur, and hang them in a cool, airy room, so as not to touch each other. I once kept a lot in the cellar, hung between the joists overhead, about an inch apart, and leaving the cellar windows out (screening the same); thus allowing a circulation of air which is most detrimental to the development of the moth larvæ. Protection in winter acts as a preventive to diarrhœa. Had you protected your hives, the death rate would have been the same as with the chaff hives. We have tried the experiment several times.

Moving Bees.

Please answer through the BEE JOURNAL the following questions:

1. I have my hives on a bench very close together, and wish to put them in better position; say, scatter them over a flat of ground 15 yards square. how can I remove them without losing bees? They have been wintered on the summer stands, and need transferring also.

2. How can they be removed half a mile without loss of bees?

Please do not refer to any back numbers in your answers, for I have not got them. A. J. BROWN.

Cockeysville, Md., April 9, 1884.

ANSWER.—At the first period. when they will be most likely to be shut in for a few days by cool weather. When you move them, or just when they are about to fly from the new stands, smoke and jar the hives, and put boards before the entrances, so that they will bump noses, or have to fly out sidewise around it, and remove any fixtures from the old quarters that may make them "look like home."

Convention Notices.

☞ A bee-keepers' association is to be organized in Western New York on Tuesday, May 6, 1884, at Randolph, Cattaraugus County. In this southern-tier district there are a large number engaged in bee-keeping, and an association of this kind has long been needed. A general invitation is extended to all interested in bee-keeping.

W. A. SHEWMAN.

☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyahoga County, O. All interested are invited. J. R. REED, *Sec.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884.

JONATHAN STEWART, *Sec.*

☞ The Bee-Keepers of Tippecanoe and adjoining Counties, will hold their regular quarterly meeting at room No. 3, in Purdue College, in the city of Lafayette, Ind., on May 6, 1884. All lovers of the honey bees are respectfully invited to be present and take part in the discussions.

MRS. JAS. L. HAVENS, *Sec.*
DR. L. SNYDER, *Pres.*

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 21, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c.; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H.K. & F.B THURHER & Co.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirous of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Demand for comb honey good, with lower prices: 15@16c for choice 1 and 2 lb. sections. Dark and broken or irregular comb, slow at 10@12½c. The liberal receipts of comb honey from New York State have cast much Western honey in the shade, and our Western producers will have to look to their laurels. There have been thousands of pounds of Eastern honey marketed here this season, and almost every comb has been perfect in every respect. It is hard to sell the unsightly stuff that I am receiving daily from other sources, by the side of this handsome honey from the East. Extracted in fair demand, at 8@9c, according to quality and color.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—We again advise our shippers not to put their extracted honey in old or second-hand tins and cases. The wood of old oil cases is saturated with oil, the nails will not hold, and the cases often arrive in a broken and dilapidated condition. They smell of coal oil, look rough, and are not as salable as good, clean, new packages.

White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@16c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is unchanged with us. There is a continued steady demand for choice white 1 lb. sections at 18c; 2 lbs. move more slowly at 16@17c; but for second quality there seems to be no demand. Our supplies of 1 lb. are kept well down. Extracted does not sell at all at any price.

BEESWAX—Wanted at 35c.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

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Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

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Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

* * *

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

* * *

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

* * *

☞ We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will be 50 cents.

* * *

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

The Eureka Wiring Tool

For pressing wire into Foundation. **Price, by mail, 50 cents.** Don't fail to send for Circulars. Foundation for sale.

17A1t **C. M. RULAND, Rockton, Ill.**

FOR SALE!

Dadant's Comb Foundation & Muth's

HONEY EXTRACTOR.

Correspondence solicited. Address,

WM. HAMILTON, 323 West Main Street,
17A1 5B1 LOUISVILLE, KY.

APIARY FOR SALE CHEAP.

A one-third interest in an Apiary of 75 colonies in good condition, 100 new Hives, 2 Extractors, and all necessary Implements. Best location for an apiary in the State; cheap for cash; possession given immediately. For particulars address with stamp, S. D. BATES, box 109, New Madrid, Mo.
17A2t

ITALIAN BEES

AT BED ROCK PRICES.

COLONIES—8 Langstroth Frames, in light shipping box	$ 4.50
8 Thomas Frames, in light shipping box	3.00
NUCLEI—2 or more, with tested queen	2.00
2 or more, with untested queen	1.50
QUEENS—Tested, by mail	2.00
Untested, by mail	1.00

After June 1st, 25 per cent. off.

After June 1, tested, per dozen	12.00
After June 1, untested, per dozen	9.00

Reared from Imported or Selected home-bred Mothers. No Foul Brood ever known here. Address, **C. WEEKS,**
17A4t CLIFTON, Wayne Co., TENN.

For Sale!

Eleven hundred lbs. of Beeswax.

J. C. CONVERSE,
16A3t **Ravenna, Portage Co., Ohio.**

WANTED,

By a single man who thoroughly understands bee-keeping, a position in some good apiary. Address, HUGO VOLLAND, Bloom, Cook Co., Ills. 17A1t

PURE PLYMOUTHROCK EGGS,

Per setting of 13 each, $1.00. Dry land Goose Eggs, per setting of 6 each, 75 cents.
17A2t **E. C. FARQUHAR,** Carlos City, Ind.

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

—THE—

VICTOR HIVE

is operated upon a new principle by which the sections are placed in vertical lines with the brood frames; continuous passages being effected in a

Practical Manner!

It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

Bingham Smoker

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,
G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,
T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

WHITEWOOD OR BASSWOOD SLICED SECTIONS, 4¼x4¼. A decided success. Can be used in Cases or Frames; $2.00 per 1,000. Hives and Cases good and cheap. Address N. E. DOANE, Pipestone, Berrien Co., Mich. 16A1t

THE BEST BEE BOOK

Price, by Mail, bound in Cloth, $1.

Handy Book received. Have read it and re-read it. I must say it is the finest thing on Bees I ever saw. J. R. BAGBY, La Belle, Mo.

Your Handy Book is the best work I have on Bees. L. J. HARTONG, Indland, O.

15A4 **HENRY ALLEY, Wenham, Mass.**

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

STANLEY'S AUTOMATIC

HONEY EXTRACTOR.

Reverses the combs without the aid of the hands; the reverse motion of the crank is all that is required. No time is lost, as we provide every machine with a brake to stop the motion, and the combs are half reversed when the motion stops. Can be used for 2 or 4 combs, as desired. No chance for combs to fall or get injured. The Comb Baskets always stop in the most convenient position for removing or putting in combs. We use XXXX Tin or Galvanized Iron for Cans. The Cylinder of Can is all in one piece. We challenge any Extractor, taking any number of combs, to do one-half the work of our 4-frame Machine. Prices reasonable.

☞ We want to employ good live Agents everywhere. Address,

G. W. STANLEY & BRO,
14Atf WYOMING, N. Y.

30 DAYS' TRIAL

(BEFORE.)

DR. DYE'S

(AFTER.)

ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address
VOLTAIC BELT CO., Marshall, Mich.
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GIVEN COMB FOUNDATION

And Choice Queens a Specialty.

Circulars and samples free. Send for them. It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.

G. H. KNICKERBOCKER,
15eow4t PINE PLAINS, N. Y.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do and when and, how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 a year.

Don't Fail to Send to the inventor and manufacturer of the **Bailey Swarm Catcher,** for Circular and Price List of Catchers and Bee Supplies.
16A4t **J. W. BAILEY, Ripon, Wis.**

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HAND BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
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How to Avoid them,
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Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

Early Spring! Order Now!

To introduce my Italian Queens, I will send one of my Tested Queens, if ordered before April 20, for $2.00. Send two dollars and less, in common letters, at my risk. Address **E. P. BAKER,**
10A8t Box 342, DES MOINES, IOWA.

BEE-KEEPERS, before ordering your

APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

Italian Bees and Queens For Sale.

Tested Queens, May, $3.00; June, $2.50; after July 1, $2.00 each. Untested, after June 1, $1.00; 6 for $5.40. Full colonies in May, $7.00; 2 for $13.00; 10 for $60.00. After June 1, $1.00 less each colony. Satisfaction guaranteed. I. S. CROWFOOT,
12A8t Hartford, Wis., April 1, 1884.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.
4A1y

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

American Linden or Basswood

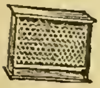
FOR BEES!

5 to 10 inches, per 100	$1.50.
3 to 5 feet, per 100	7.00.

For sale by **Z. K. JEWETT**, SPARTA, WIS.
12A6t 4B2t

FLAT - BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine. 4A1y

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Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞Send 10c. for Practical Hints to Bee-Keepers.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,
12A8t 4B4t AUGUSTA, GA.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

32ABtf **J. VANDERVORT, Laceyville, Pa.**

A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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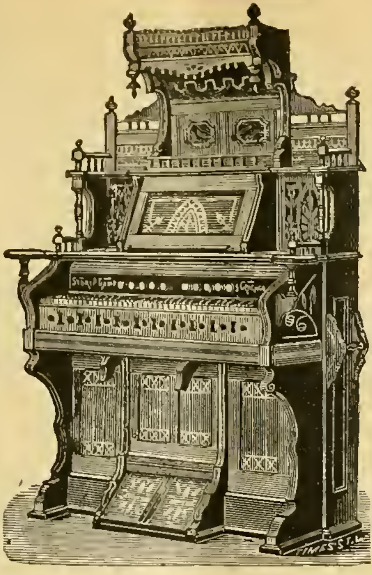
Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.



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Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros., Haines Bros., Mathushek, Simpson & Co., Story & Camp.	Estey, Story & Camp. The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.
Write for our prices before buying elsewhere.

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188 & 190 State Street,	203 N. Fifth Street,
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NEW Vegetables
A Specialty.
GREGORY'S SEED CATALOGUE.
1854.-1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all.
JAMES J. H. GREGORY, SEED GROWER, MARBLEHEAD, MASS.

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.

MRS. FRANCES DUNHAM, De Pere, Wis.

Dear Madame:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.
Yours, CHAS. DADANT & SON.

Beeton, Ont., Dec. 10, 1883.

MRS. FRANCES DUNHAM, De Pere, Wis.

Dear Madame:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

Genoa, Cayuga Co., N. Y., Dec. 12, 1883.

MRS. FRANCES DUNHAM:

All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.
Yours respectfully, J. G. WHITTEN.

Kenton, Ohio, Dec. 29, 1883.

MRS. FRANCES DUNHAM:

After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

Omaha, Neb., Jan. 18, 1884.

MRS. FRANCES DUNHAM:

I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to

FRANCES DUNHAM, De Pere, Wis.

2Btf 6D6t

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

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Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.

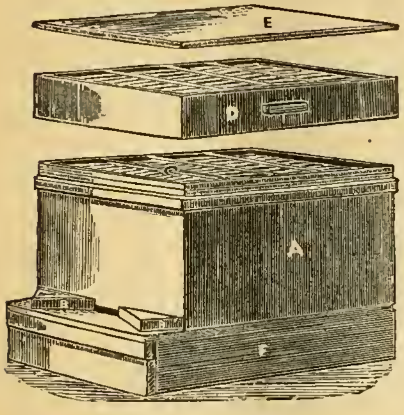
7A13t **H. C. WHITE**, MADISON, IND.

HELP WANTED.—1 agent wanted in every place to sell our new goods. Big pay. 40 samples only 10c. None free. Cut this out Acme Novelty Co., Clintonville, Conn.
13A8t

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

1868. 1884.

HEDDON'S COLUMN.



My New Langstroth Hive.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey..........................	$3.00
The above Hive complete for both in one..............................	4.50
One Hive in the flat..................	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,
JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

BEE-KEEPERS' SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS.

The present prices are as follows:

White Clover, $15.00 per bushel, $4.00 per peck, or 30 cts. per pound.
Alsike Clover, $12.00 per bushel, $3.25 per peck, or 25 cts. per pound.
Sweet Clover, $10.00 per bushel, $2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE

For Brood Frames.

One ounce spools, each, - 4 cents.
Postage, 2 cents extra.
One oz. spools, per dozen, 40 cents.
Postage, 13 cents extra.
One pound spools, each, 40 cents.
Postage 18 cents extra.
One pound will wire about 175 frames.

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new. Price, 50c. by mail.; 40c. by express.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

CHEAP FOUNDATION MILLS.

These Mills will make Foundation of any desired thickness, for either Section Boxes or Brood Frames.

PRICES:

4 inch Rolls....................	$10.00.
6 " "	15.00.
10 " "	25.00.
12 " "	40.00.
14 " "	50.00.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,

923 West Madison Street,
CHICAGO, - - ILLINOIS.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

Valuable for all who are interested in the care and management of bees.—Dem., Allegan, Mich.

Engravings are fine. Gotten up in the best style and is cheap at the price.—Farmer, Cleveland, O.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

A manual, containing all the newest discoveries in the management of these little workers.- Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm. Longmont, Colo.

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Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

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THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., April 30, 1884. VOL. XX.--No. 18.

THE WEEKLY EDITION OF THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

925 WEST MADISON ST., CHICAGO, ILL.

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THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

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☞ The Pike County Bee-Keepers' Association will hold its semi-annual meeting at Pittsfield, Illinois, Saturday, May 3, 1884, at 10 a. m. All are cordially invited. Any one having new apiarian implements, or any thing that will advance the interest of the meeting, are requested to bring them for exhibition.

T. C. BUNKER, *Sec.*
W. T. F. PETTY, *Pres.*

◆

☞ There will be a meeting of the Northeastern Kansas Bee-Keepers' Association, at Hiawatha, Brown Co., on May 16, 1884. A general attendance of bee-keepers is expected.

Granada, Kan. L. C. CLARK, *Sec.*

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Bees and Honey (paper covers)......	2 50..	2 25
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work.........	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
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Kansas Bee-Keeper.......	3 00..	2 75
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☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

☞ Now is the time to plant young basswood trees, for future pasturage for your bees. You may see them advertised in this paper.

◆

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

☞ The Cortland Union Bee-Keepers' Association, will hold their spring meeting May 13, 1884, at Cortland, N. Y. M. G. DARBY, *Sec.*

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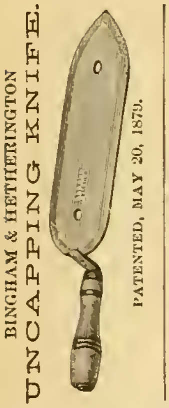
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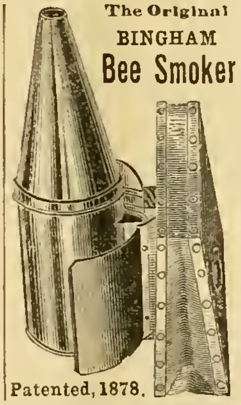

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Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey; the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English** and **German.** Price for either edition, **5c.**; per dozen, **40c.**

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Quinby's New Bee-Keeping, by L. C. Root—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—**$1.50.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Novice's ABC of Bee-Culture, by A. I. Root—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25**; paper, **$1.**

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, **$1.00.**

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, **$2.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. **15c.**

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THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., APRIL 30, 1884. No. 18.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Premiums on Bees and Honey.

The following is the Premium List on Bees and Honey as secured by the Executive Committee of the Iowa Bee-Keepers' Association, as mentioned on page 277 of this JOURNAL. These premiums amount to $175.00, and Iowa bee-keepers should make a success of the apiarian department, by arranging such a display as will create astonishment. It can and should be done. Let every bee-keeper in Iowa read over the List, and then work for the premiums there offered.

	First	*Second*
Best Italian bees in observatory hive.	$ 5.00	$ 2.00
Best Cyprian bess in observatory hive	5.00	2.00
Best Syrian (Holy Land) bees in observatory hive	5.00	2.00
Best black (German) bees in observatory hive	5.00	2.00
Best and largest display of different races of bees, in observatory hives	20.00	10.00
Best and largest number of Queen-cells on one frame of comb as actually built by the bees, shown with bees in observatory hive	5.00	2.00

NOTE.—In awarding the premiums on the different entries of bees, the qualities of Queens and Bees will be considered. The Bees and the Queen-cells should all be shown in observatory hives with glass on both sides, so arranged that both sides of the comb can easily be seen.

Best comb honey, white clover or linden, not less than 20 lbs	$ 5.00	$ 2.00
Best comb honey, fall flowers, not less than 20 lbs	5.00	2.00
Best and largest display of comb honey	25.00	10.00
Best extracted honey, white clover or linden, not less than 20 lbs	5.00	2.00
Best extracted honey, fall flowers, not less than 20 lbs	5.00	2.00
Best and largest display of extracted honey	25.00	10.00
Best beeswax, not less than 10 lbs ...	4.00	2.00
Best display of honey plants, pressed, mounted, and labeled	4.00	2.80

NOTE.—In awarding the Premiums on all the different entries of honey, the committee will give equal consideration to the quality of the honey, and to the style of the packages in which it is exhibited, as regards beauty and desirableness for purposes of marketing.

Bees and Honey are the great attraction at all the fairs which have given prominence to this industry, and we are glad to note the increasing interest year after year in the matter, as well as the increased size of the Cash premiums offered by the wide-awake managers of local, district and State fairs.

There are many good reasons for making magnificent honey exhibits, but the chief one, perhaps, is that those who produce honey for the market, may be induced to present it in the most marketable shape; for the new methods and new ideas of practical management must take the place of the old and undesirable ones.

It should be our aim to make honey a staple product. To this end, let all endeavor to popularize the consumption of honey by the masses, as well as to raise the standard of production, by applying correct principles and progressive art to the management of the apiary.

If there is one thing of more importance than another to the honey producer, it is that of popularizing the consumption of honey. These "shows" are the best educators of the masses that have yet been devised. In an article concerning the Toronto Bee and Honey Show, Mr. Wm. F. Clarke says:

"Under the stimulus of the liberal prize list, there was a magnificent array of honey. The directors appropriated an entire building to the use of bee-keepers, and for the first time at a great exhibition on the American continent, "honey hall" advertised itself side by side with horticultural hall, dairy hall, etc. Honey was displaved in every form, calculated to make the mouths of spectators water. The tin packages and cans were gorgeously colored and labeled; the glass jars were in various beautiful shapes, and even the wooden boxes displayed a wonderful diversity of taste. In the center was a miniature church, ingeniously built of honey-comb and wax, with pinnacles and spire. A smashing trade in honey was done at the exhibition. Thousands of people might be seen with gay-looking tin cans dangling from their fingers, or with pretty glass jars in their hands, or nice boxes under their arms. They bought and carried them home very much as is usually done with toys and trinkets on such occasions. The success of this show awakens great expectations as to the future of bee-keeping in this country.

Of the Honey Show in San Francisco, Cal., the *Semi-Tropic* said:

"The attractive display of bees and honey formed a centre around which apiarists literally swarmed. One hundred and two varieties of honey-producing flowers, formed a novel and interesting feature of this exhibition. The decorations of white sage were tasteful and appropriate, and the nectar itself, in jars arranged in pyramidal shape, clear as crystal, supported by frame after frame of comb honey, snowy and inviting, made a picture which cannot be photographed except by the artist memory. There were samples of excellent honey vinegar, almost colorless, and above average in acidity; several samples of fruit preserved in honey with undeniable success, and three kinds of honey cake, which elicited the warmest praise from those who were fortunate enough to secure a sample. Fruit cake made with honey is richer, and retains moisture much longer than that made of sugar."

☞ The Fremont, Mich., *Indicator* of last week, has the following:

George Hilton will attend the bee-keepers' meeting at Berlin, 24th, and also endeavor to have the next meeting of that association held here. It would pay any one interested in that line of business to come to Fremont and look through George's apiary; it is a very well regulated affair.

This is praise worth having. How much better than to say his apiary was a disgrace to the neighborhood.

Spider Plant.—Mr. S. F. Daily asks how large the spider plant grows; how far apart the plants should be, etc.?

Its botanical name is *Cleome pungens*, and it thrives best in rich, damp clay soil. It grows to the height of 5 or 6 feet. Plant them about 3 feet apart each way.

It commences to bloom about June 25th, can easily be propagated from the seed, and is an excellent honey-producer.

☞ Balmy spring weather has come at last, and soon the flowers will bloom and all nature will look gay, clad in its rich garb of lovliness.

☞ We have received the Bee-Keepers' Price List for 1884 of Thos. L. Thornton, Dividing Ridge, Ky.

CORRESPONDENCE

For the American Bee Journal.

Comb Foundation in Brood Frames.

G. M. DOOLITTLE.

On page 672 of the BEE JOURNAL for 1883, I promised to discuss the matter regarding the economy of comb foundation, as Mr. Chas. Mitchell seems to think (page 362 of the BEE JOURNAL for 1883) that my plan of getting the bees to build 4 or 5 nice combs before helped by empty combs or foundation, to be "mistaken economy."

I have reason to doubt Mr. Mitchell's following out the plan as I gave it on page 80, of the BEE JOURNAL for 1883; for he does not even allude to that way of working, but tells us of giving his bees frames half filled with foundation, which was placing them in just the condition I cautioned against, viz.: a condition tending toward the production of drone comb in the brood frames. The object of the plan I gave on page 80, was to have this drone. or store comb, built in the sections, if any such was built at all.

The majority of the bee-keepers of the United States seem to have gone crazy over the using of comb foundation in the brood frames; so it appears to me. This is causing all, whether rich or poor, to believe it necessary to invest a large sum of money in comb foundation, or mills to make it. To those who have plenty of money to use lavishly, I have nothing to say; for it is their privilege to use it as they please; but to those who must deprive their families of the necessaries of life, in order to purchase foundation for their bees, I say do not do it; for in my opinion natural comb can be built just as cheaply as we can bother with foundation.

I realize that this assertion will call down many hard thoughts, if not hard words upon myself; but I desire that those who think otherwise, will follow my plan on one or two hives before they are too severe in their criticisms.

The plan I wish them to follow, and the one which has led me to the above opinion, is this: Wait till natural swarming has fully commenced, when two swarms are to be hived on the same day, each being as near equal as possible; one is to be treated to foundation the same as you formerly have done, and the other is to have empty frames given them, each frame having a nice starter of worker comb, or a wax guide the whole length of its top bar, or a strip of foundation ⅝ of an inch wide in place of the comb or guide, as you prefer. Place as many frames in the hive thus prepared as it will contain except one; and in place of this frame use a division-board coming within ⅛ of an inch of the bottom-board, having this division-board in the centre of the hive.

Now, hive the swarm, and in 36 to 48 hours see on which side of the brood the bees have commenced to build comb the most largely; for there is where the queen will be; take out the frames on the other side of the brood from where the queen is, and over the part having the frames now left, place a set of sections which are filled with the thin foundation. Leave them (frames and sections) thus, till the bees begin to be crowded for room, when you are to put two or three of the empty frames you removed, in the brood-nest, placing them between those already built, so that each empty frame will come between two full ones. At the same time raise up the partly filled sections, putting another one, prepared the same as the first, under them; if you use the tiering-up plan, or place the sections at the side if you use the side storing plan.

By this plan I get combs built which are all straight worker combs just as good as can be prepared when built of foundation; and also get the foundation thinned and drawn out in the sections; while, if I hive the bees on empty combs or foundation, they use their secretion of wax by placing it upon the foundation in the sections; and thus we have the thick, hard, side walls of the foundation in our section honey, as I have repeatedly proven by scraping the honey off and washing the foundation, when I had a piece that no one could tell from the original.

Did Mr. Caldwell (see page 25) try the above plan in his experiment? or did he hive the bees, giving them the full hive? If he gave them the full hive, of course they would not go into the sections till the hive was all filled below.

The idea is, that a swarm of bees are going to build comb somewhere, or the wax secretion taking place at the time, must go to waste; and if you give them comb foundation in the brood-chamber. they will use their wax in the sections on the foundation. If you give them only a part of the hive, as I have given above, they will use their wax in making nice worker comb below, instead of wasting it by adding it to the foundation given them, as I have described above.

Again, at all times of a heavy yield of honey, the bees secrete wax whether any combs are to be built or not; and if the sections are all supplied with foundation, and the hive filled with comb, this wax is wasted, or else the foundation given is wasted; have it which way you please.

The past season I had several hundred sections placed side by side on colonies hived on a full set of combs; one-half of which had a starter of natural comb, and the other half filled with foundation, and all were ready to come off together; thus proving that in such times of plenty the foundation was simply thrown away, when a full hive of comb was used below. To remedy this waste, I use the 1½ and 2-pound sections containing only starters, upon colonies whose hives are full of comb (except to have 3 or 4 sections full of comb foundation, as a leader into the boxes), and place sections filled with foundation in colonies which are building comb. With the one-pound and smaller sections, foundation seems to be a necessity; for the bees seem averse to building comb in so limited a space.

To show that I am not alone in this matter regarding the waste of wax, I wish to quote from two or three of our best apiarists; the first is Prof. Cook, and no one will say that he is not good authority. He says, on page 103 of the latest edition of his Manual, "But I find upon examination that the bees, even the most aged, while gathering, in the honey season, yield up the wax scales the same as those within the hive. During the active storing of the past season, especially when comb-building was in rapid progress, I found that nearly every bee taken from the flowers, contained wax scales of varying size, in the wax-pockets."

This is my experience during "active storing," and the wax scales are to be found on the bees just the same whether they are furnished with foundation or not; and I can arrive at no other conclusion than that arrived at by Mr. S. J. Youngman, when he says, on page 103: "The bees secrete wax during a honey flow, whether they are building comb or not; and if they are not employed in building comb, this wax is most certainly lost."

Once more, on page 93, of the *American Apiculturist*, Mr. G. W. Demaree says: "Observation has convinced me that swarms leave the parent colony better prepared to build comb than they ever are under other circumstances; and if they are not allowed to utilize this accumulated force, by reason of having full sheets of foundation at hand to work out, there will necessarily be some loss; and I think that when the matter is computed, to find the loss and gain, the result will show that the foundation really costs the apiarist double what he actually pays for it in cash."

One more point and I will close. In our locality there is very little white clover, as this is mostly a grain raising district, so the land is plowed so often that white clover cannot get a foot-hold. Thus our bees generally get only enough honey during the month of June to keep up brood-rearing, while our swarming commences from June 15 to 20.

Now, I have often noticed, and especially in looking back over the last year, after reading Mr. Mitchell's "Mistaken Economy," that swarms hived in June would fill their hives full of nice straight worker combs, and the combs would be filled with brood during the first two weeks after hiving; while a colony not casting a swarm would not make a gain of a single pound of honey; nor would a swarm having a full set of combs given them, or the frames filled with foundation, be a whit better off at the end of two weeks.

Mr. P. H. Elwood has noted the same thing; thus proving that the theory that it takes 20 pounds of honey to produce one pound of comb, will not hold good in cases where bees desire comb and have free access to pollen.

As most of my comb is built at this time, the reader will readily see that the combs cost me but little, save the looking after the colony once or twice while building comb, which is far cheaper than buying foundation, or fussing with a foundation mill.

As I said in a former article, I have never used 10 pounds of foundation in the brood-chamber; yet, I have experimented with it every year, and those experiments have led me to consider it an expensive luxury compared with natural combs, where the above plans are adopted.

In conclusion I will say that if this article shall lead any reader to have his combs built by the bees, thus saving the loss of wax, which must arise from using foundation in the swarming season, and also saving his hard-earned pennies, which he would pay out for foundation, and lay them out for the comfort of his family, this article will not be in vain. As I said at the outset, those having plenty of money to use, as they please, can pass this by unheeded; for, without doubt, they will enjoy the luxury of foundation, or modern transferring, better than to encourage and give the benefits of such economy to some poor neighbor.

Borodino, N. Y.

For the American Bee Journal.

Convention at Franklin, Ind.

In response to the call, a number of bee-keepers met at the Court House in Franklin, on April 5, and organized a bee-keepers' association. The meeting was called to order by Mr. L. R. Jackson, and the object of the meeting stated.

Mr. H. H. Luyster, of Franklin, was chosen temporary chairman, and L. R. Jackson secretary *pro tem.* On motion, the chairman appointed L. R. Jackson, J. T. Ragsdale and Mrs. Hannah Barlow as a committee to draft a constitution and by-laws, and to report at the afternoon session. The meeting then adjourned.

At 1:30 p. m., the chairman called the meeting to order, and asked for the report of the committee on constitution and by-laws. On motion of Mr. Frank L. Dougherty, the secretary was instructed to read the report, by sections, and the same to be discussed as read. After a few changes, the constitution and by-laws was adopted, and signed by 21 members.

On motion of Mr. John Beard, Mrs. Cass Robbins, President; Mr. Frank L. Dougherty, Secretary; and Mrs. Lizzie Stout, Treasurer, of the Indiana State Bee-Keepers' Association, and Mrs. Robt. A. Kelly and Mrs. H. Delano, of Franklin, were made honorary members.

The following officers were then elected: Prof. C. H. Hall, of Franklin, President; Mrs. Hannah Barlow, of Rocklane, Vice-President; Mr. L. R. Jackson, of Urmeyville, Secretary; and Mrs. Phœbe J. Kelly, of Franklin, Treasurer.

Mr. F. L. Dougherty, of Indianapolis, being called for, made a few remarks, and was subjected to a running fire of questions, for half an hour, which he answered in an able manner. Questions were then asked of others.

Mrs. Robbins urges all, and especially the ladies, to attend the State Association, and to take a more active part in bee-keeping. She is a very enthusiastic bee-keeper, and encouraged our lady bee-keepers very much.

The next meeting will be held at Franklin, Ind., on Saturday, May 3, at 1 p. m.; at which time a much larger, and a very enthusiastic meeting is anticipated.

Mrs. Ella Jackson will read an essay to encourage the ladies in bee-keeping. Topic: "Bee-keeping, a Profitable Business for Ladies."

L. R. JACKSON, *Sec.*
PROF. C. H. HALL, *Pres.*

For the American Bee Journal.

To Iowa Bee-Keepers.

Your attention is called to the fact that at the State Fair in Des Moines, last September, an "Iowa Bee-Keepers' Association" was formed to advance the science of bee-keeping, and to further the interests of bee-keepers. It is very desirable that this association have the friendship and co-operation of every bee-keeper in Iowa.

It is proposed to have a large meeting of bee-keepers on the Fair grounds in Des Moines next fall, Aug. 29 to Sept 5. Bee-keepers are invited to come with their wives and families. Bring tents and other essentials for camping out, and camp on the Fair grounds during the whole time of the Fair. Many people do camp on the grounds every year, and find it a pleasant, interesting, and an inexpensive way of spending Fair week. No charge is made for the privilege of camping on the ground.

It is proposed to have meetings of bee-keepers on the Fair ground, every night during Fair week, for mutual benefit. Experiences will be related, and methods of management discussed. Short papers will be read by practical men and women on important points in connection with bee-keeping. Perhaps some lectures may be given fully illustrated with materials and charts. Hives and other bee-keeping materials will be brought to the meetings and exhibited and discussed. It is believed that these nightly meetings, during Fair week, will be a source of much interest and profit to all. All bee-keepers are urged to come with their families and friends, and encamp near each other in a "bee-keepers' village," and so have a real "school of bee-keeping."

In aid of these nightly meetings, it is proposed to have a good tent bought and owned by the Bee-Keepers' Association, and used as head-quarters for all bee-keepers during the Fair week. Such a tent would serve for these large evening meetings, and as a reading room and committee room during the day. Men who bring blankets with them, will find it a good place to sleep in.

The executive committee of the State Agricultural Society dealt generously with bee-keepers in the premiums offered in our department in 1883. They are still more generous the present year, having increased the aggregate of premiums offered last year by about 60 per cent. This year the premiums amount to $175. If the bee-keepers of Iowa and the West respond by coming out in force and making a good show, we can, next year, get another advance in premiums.

It will be at once noticed that the premiums, this year, are confined to bees, honey, beeswax and honey plants. Nothing on hives or other bee-keeping implements and materials. This is done by the decision of the executive committee of the State Agricultural Society. They say that in other departments, they give no premiums on tools, implements, machines, etc.; and, hence, it is not consistent for them to offer premiums on these things in bee-keeping. Nevertheless, they have large and profitable exhibits of tools and machinery in all departments, and they invite and expect a large exhibit of the same from bee-keepers.

In bees, honey, beeswax, and honey plants, we believe that the premiums are, on the whole, the best ever offered in America. It is hoped that the bee-keepers from all parts of our State will heartily respond to this generous treatment by coming out in large numbers, and bringing their articles for competition and exhibition. By co-operation among our bee-keepers, we can have a very large, important, and instructive exhibit next fall.

Will you not begin the season with a determination to exhibit at the Fair? Then manage your bees so as to have something good to show, and so plan your work in the fall as to go to the Fair for the whole week if possible, and take your articles with you.

Every bee-keeper in Iowa is invited to interest himself or herself in the prosperity of the State Bee-Keepers' Association. Join it yourselves, and ask your neighbors to join. Attend its meetings, and use your voice and influence to make the meetings valuable. L. E. Cardell, of Malcom, is the secretary. Send him your names, and the annual fee, one dollar, and be enrolled as members. Get your friends to do the same. The money so obtained will be used, this year, for the purchase of the tent, in which all members will have an equal share and right.

The next annual meeting of the State Bee-Keepers' Association will be held on the Fair grounds in Des Moines during the next Fair. All members, men and women, have equal rights and privileges in these meetings. At the next meeting, officers will be chosen for the ensuing year, and the general work and policy of the Association will be decided upon.

While this circular is addressed specially to the bee-keepers of Iowa, it must be remembered that our Association is open to all from every State who come in and pay the small fee of one dollar. Our Iowa State Fair is open to the world. All competitors from every State and Nation are heartily invited, and their exhibits welcomed to competition on equal terms with those from Iowa.

It is very desirable that all parties, intending to make an exhibit at the Fair, should send a correct list of their proposed entries to Hon. John R. Shaffer, Secretary of the State Agricultural Society, Des Moines, some days before the opening of the Fair. Their entry cards will then be made out, and will be ready when they call for them. This greatly facilitates the labor of all parties.

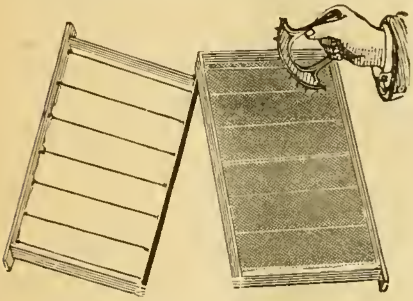
O. Clute, Pres., Iowa City.
L. E. Cardell, Sec., Malcom.
M. Sorrick, Treas., Des Moines.
O. O. Poppleton, Williamstown,
Executive Com.

For the American Bee Journal

Foundation in Wired Frames.

C. M. RULAND.

One of the main things that is attracting the attention of bee-keepers at the present time, is wired frames; and the fact that one dealer buys No. 30 tinned wire by the ton, to supply his customers, and that another states that his sales have increased ten-fold each year, and the large quantities sold by others, indicate the magnitude of its use.



How to use my Wiring Tool.

We have yet to hear of the first bee-keeper who has tried wired frames and then abandoned them. I think that it is only a question of knowing their advantages, when all will use them. By their use you are sure of straight combs right where you want them; and, if the wire is properly pressed into the foundation, it saves fastening it to the top-bar; if it is left an inch below it, the bees will extend it the very first thing they do. If a swarm is hived on sheets of foundation, there is no danger of the sheets pulling loose from the top-bar, and falling down, and then there is no sagging.

There is great need of instruction as to the proper manner of wiring them. Only a day or two ago one of my neighbors told me that not knowing the right way, he had put one wire lengthwise of the frame, about half way down; and, although, that was better than none at all, he was very sorry that he did not put them in right. I would like to give directions for placing the wires, and, from the engraving, I think it will be plain. I have carefully investigated the matter, and I believe the best authorities will bear me out in it.

First, bore 7 holes in each top and bottom bar, the first hole about one inch from the end of the frame, the others about equal distances apart. Commence at one end and sew the wire through the holes, draw it tight, and fasten at each end with a tack driven into the frame with the wire wound around it. Draw the wire tight enough to spring up the bottom-bar slightly, and spring in a stiff stick long enough to draw the bars straight, and the wires will be as straight and tight as a fiddle string. After the wire is pressed into the foundation, this stick can be removed and the foundation will hold the wires straight. I take no stock in top-bars so light that they need diagonal wires and a brace to hold them up. Make the top-bar at least ½ of an inch thick, and it will never sag.

Over a board the size of the inside of the frame, place the foundation; on this, place the wired frame and press in the wire. Here trouble often occurs; for of all the things that bother bee-keepers in using wired frames, pressing the wire into the wax is the worst. I tried the button-hook process, a small wheel in a handle, a clock-wheel, and numerous other ways, but found them all slow, tedious, and unsatisfactory. They marred the foundation by plowing through it, and left the wire just stuck on, instead of embedded in the wax; so I was compelled to make a tool that would work better.

I first made it of wood; but that got wet, and warped and split; so I cast one of block tin, which has an advantage, as it keeps bright, is very strong, and will last forever.

This tool only touches the wire at intervals of ½ an inch, and scarcely mars the wax at all. The wire cuts down to the centre of the foundation, and holds almost as strongly as if it were put in with a Given press.

The engraving shows the shape of the tool, and the manner of using it. The directions are for the Langstroth frame, and can be modified to suit any other. I hope that this will help the multitude of seekers for information; and if I have succeeded, I shall be pleased indeed.

Rockton, Ill.

For the American Bee Journal.

Selling Unripe Honey, etc.

JOHN WITSCHY.

"When shall we extract honey?" is the subject of an article on page 215, in which the writer says it is a question of importance; but I think the answer is still more important.

All are aware of the low price paid for extracted honey; and just as long as bee-keepers practice Mr. Balch's teachings, it will not be any higher. Mr. B. makes a poor comparison in comparing a bee-hive to a cow stable. All who are acquainted with bees know that there is nothing cleaner than a healthy colony of bees in time of the honey flow. The aroma of the honey indicates the kind, even without opening the hive.

I think we should be satisfied if we save the bees from building comb without bothering about the capping of it. If we considered the quality of honey instead of the quantity, we should soon find the prices increasing. One who sells unripe honey is as dishonest as one who sells unripe fruit. My highest endeavor is not to sell the most honey, but the best. The reason we hear of so much candied honey, is because it was extracted before being ripe, thus the aroma escapes and leaves nothing but a sweet mass unworthy the name of honey. The presence of the aroma is required to preserve it in its natural state. For the past 5 years, I have had no honey granulated before spring.

People will be cheated; for the butter and cheese must be yellow, and the honey white, all contrary to nature; but this is no reason why we should use adulterations. We should aim to keep everything as nearly in its natural condition as possible. Take no honey from the hive before it is capped, and we shall soon have a good demand for extracted honey.

Morrill, Kans., April 14, 1884.

For the American Bee Journal.

Italian vs. Brown Bees.

H. V. TRAIN.

About 20 years ago I started with a brown race of bees, found in great abundance in the woods along the Kickpoe river, some 25 miles southwest of this place. I kept them apparently pure until 1878 or 1879, when yellow bands began to appear in some colonies; doubtless from Italian drones two miles away. As so much was said in favor of the Italian bees, and they looked so nice, I determined to introduce more Italian blood, and I bought 13 dollar-queens and introduced them.

At the time I introduced these queens, I had 108 colonies; but when white clover bloomed, there were 24 colonies too weak to work in supers; and among them 4 of the Italians. I doubled the 24 down to 12, and gave each of the 4 Italians another colony of bees and brood.

I run all for comb honey, and the result was as follows: Twelve colonies did not swarm; 3 of these were Italians and 9 natives. From 33 Italian colonies, I took from No. 1, 35 lbs.; from No. 2, 35 lbs.; from No. 3, 37 lbs. From the 9 native colonies, I took from No. 1, 42 lbs.; from No. 2, 75 lbs., and so on up to No. 9, 108 lbs. From the Italian colonies that did swarm, I obtained no surplus honey; from the natives that swarmed, I got some surplus from nearly all, and from many over 40 lbs., and from one, 80 lbs. I had 58 young colonies besides nuclei built up. Of these, 20 were pure Italians, and only 5 of them gave any surplus, and the best only 14 lbs.; while nearly all the young natives gave some surplus; many over 40 lbs., and one 65 lbs. But about one-half of those I call natives, had more or less yellow bands, but native queens.

The native queens, which were put into the nuclei, filled their hives of 13 frames, and one of them made 22 lbs. of surplus, and another 10 lbs. I noticed another fact: We could take the honey from 2 native colonies while we were taking the same amount per colony from one Italian. But a friend says Italians can reach deeper into flowers than blacks can. Perhaps they can; I have had no experience with blacks; but here are some more facts: My apiary, in September, was about half and half brown and yellow bees; and about the first of September, being anxious to know where a flow of honey was coming from, I visited some red clover fields near by. The first time, I went in the afternoon, the fields were buzzing with bees, but they were nearly all brown bees.

As I was anxious for facts, I counted, and proved that there were 12 brown bees to one yellow on the red clover blossoms. I went again, and found the same result. Afterwards I went in the morning, and found three brown bees to one yellow bee. These figures surprise me, but they represent facts. I am satisfied that all Italian bees are not superior to some brown bees.

It cannot be that these Italians fairly represent their race, or else they are compared with something more than an average of the German race. With these facts in mind, I, for one, shall go slow in taking a bee merely because it is yellow.

Mauston, Wis.

[Had you purchased good tested queens, probably the result would have been different. Buying poor untested queens may have been the cause.—Ed.]

* * *

For the American Bee Journal.

Bees as Property, etc.

E. B. SOUTHWICK.

Mr. Pond has corrected my statement that "bees are not property under the law;" and for proof, cites a case where a man's bees came out of the hive, and he watched them until they went into his neighbor's enclosure, and there secured them, taking them away, and the law bore him out in it. It would be the same if he had a deer, wild turkey, bear, or any of that class of animals. If they had escaped from his enclosure, and he had followed them, keeping in sight of them, as they are required in case of the bees, and the animal goes into his neighbor's barn, and he secures it there, he has the same right to take it away as he had the bees. I once knew of a board of supervisors who voted that they would assess bees $2 a colony; but some of the more cautious ones concluded they would inquire of some competent lawyer about it, and the result was that the assessing of bees was abandoned in that county. I noticed Mr. Pond's attempt to ridicule the idea of bee-keepers having the right of priority in territory. I think, if a man has discovered a good locality in which to keep bees, and that is unoccupied, and spends his time and money to test and occupy it, he has just as much right, in justice, to it as though it had been some new-fangled tooth-pick he had invented and patented.

Sherman, Mich., April 15, 1884.

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For the American Bee Journal.

Something About Patent-Rights.

JAMES HEDDON.

What is a patent-right? It is simply an exclusive right given to any inventor who will pay for the patenting expenses, as a reward of merit offered for the purpose of stimulating improvements in all the implements and devices used by man.

There have been so many worthless devices patented and sold, that it seems as if, on the whole, the patent-system had been more of an injury than a benefit. Just how much our Nation owes its great advancement in "Yankee invention" to our cheap patent-system, we are hardly able to judge.

Mr. A. I. Root is opposed to patents; at the same time he favors a reward for meritorious inventions, as is proven by the money credits he often gives to some who send him some improvements or new and useful devices.

Be that as it may, we have such a government system created and sustained by the will of the majority, and if we are good citizens, we are bound to obey and help sustain it. There are some good things that grow out of the patent-system, good for the patentee and public.

Mr. Brown discovers a new way to construct a honey extractor, so that it will accomplish much more with less labor and time than any of the past will do. No one knows so well as Mr. Brown just how good all the parts must be made and adjusted to make his invention give that satisfaction that is expected of it, and which he claims for it. He gets a patent on the machine. He begins their manufacture and sale, and fixes a price that will always allow him to make a good article. By thus turning out an honest job, he soon builds up a reputation for his new extractor. This advertises in a very extensive and substantial manner. He thus makes a paying business, and benefits every customer at the same time.

Now, let us suppose that there is no patent-system. Just as soon as Peter Funk finds out that the valuable discoveries and genuine workmanship of Mr. Brown has gained a reputation, out he comes with a little cheap circular, making a specialty of "Brown's honey extractors." But Mr. Brown's good work and square dealing has turned the whole volume of trade Brown-ward. Very soon Mr. Funk realizes this disagreeable fact, and the next thrust, he cuts prices, and then comes the inevitable cut in the quality of the goods. It is then that Mr. Funk takes a hand in manipulating the reputation of the "Brown extractor." Soon the implement begins to lose reputation. Even Mr. Brown does not make them as good as he used to. He is trying to hold his trade and keep the price as low as that quoted by Mr. Funk, and degeneration in quality is the result. Mr. Brown is damaged. The public are injured, and no one but Mr. Funk is benefitted; and he only until the less enlightened portion of the public can understand that cheap prices mean cheap material and cheaper workmanship.

I believe that a man has a moral right to the exclusive manufacture and sale of the fruits of his mental industry, so long as he is engaged in supplying the public with them of good quality, at a reasonable price. I do not believe in exorbitant prices. I am, however, a stickler for good goods, and detest shoddy wares, as well as moral thievery.

Patent-law, as well as all other law, is made to compel those to act honorably who will not do so of their own free will; then let us truthfully say that we will act honorably, and do not need its restraint.

I think I have never sold any article of another's invention while the inventor was supplying it; except as I purchased of him. Our pursuit has been seriously damaged by the manufacture and sale of shoddy wares. These goods were the necessary result of a cut-under in prices, which was indulged in by some one who had no other means of getting any trade.

By the way, this brings me to a point that I have often thought upon. At present there seems to be a perfect mania for dealing in bee-keepers' supplies. I know there is no bonanza in the supply business. Are not most of those taking to it illy situated and little known; possessing so little enthusiasm in the business of producing honey, that they are led to the new departure? In other words, is the honey business so poor a one that something else must be done, or had better be done? I firmly believe that many are making a mistake in entering the trade at all. Let us see if the future does or does not sustain me in this opinion.

But to return to the patent question. Perhaps no class of business men have been more assiduously worked upon to prejudice them against patents, than have bee-keepers; and all this because our business is surrounded with worthless patents. This is all wrong. When you defame patents and patentees indiscriminately, you are attacking without cause or provocation some of the grandest principles and grandest men that have ever existed.

In our own line, let us look at the Langstroth hive and its inventor. Was it a crime for Mr. Langstroth to patent his valuable discoveries? Was it wrong for him to charge you $10 for what was worth to you more than ten times that amount? Did not your $10 pay for an individual right, and help Mr. L. to enlighten others to the fact that he had hundreds of dollars worth for them for only ten dollars.

> "Some people, if they had their pleasure,
> Because silly bargains are made;
> Would deem it a rational measure,
> To lay an embargo on trade."

Patent or no patent, we should avoid buying worthless goods. Worthless either in principle or construction. We should respect the inventor who patents his inventions. We should respect and help to protect him who does not patent his inventions, as long as he deserves it. The question is a simple one; there is nothing mysterious about it.

Dowagiac, Mich., April 2, 1884.

For the American Bee Journal.

Fixed Frames.

A. WEBSTER.

One writer says: "The nearer we come to nature, the nearer we are to right."

I do not now propose to tell any one how to make bee-hives, or how to construct frames, which, in advanced bee-keeping, are considered the most important feature of hives, but to briefly discuss principles and seek the teachings of nature which are right for a guide in constructing the frames and hives of the future.

The chief advantage of comb frames, to the bee-keeper, is the facility they offer for manipulating in various ways. This has been made much of, while the relations of frames to the natural instincts and working habits of the bees has been neglected.

Frames in their relations to the bees may be considered as follows: 1. As fixtures to which to attach the combs and hold them in place. 2. As bounds to the separate cards or curtains of comb; determining their shape and size, both absolute and relative. 3. As a means of expanding or constructing the hive at the will of the bee-keeper, to meet the requirements of either large or small colonies at all seasons and in all climates. 4. Collectively, as a nucleus about which to arrange surplus receptacles.

1. No one will question that in a natural state bees always select fixed objects to which to attach their combs; or that when put into hives with loose bars or frames, they will fix them in the most thorough manner, which the means at their command will admit; or that any jar or disturbance of their combs, as a whole, or in their relations to each other, is distasteful to the bees. Therefore, we say frames should be fixed firmly in place, but easily detached for necessary manipulation. Safety and convenience unite in requiring it. Thus, only can we come near to nature and to right without sacrificing the requirements of art.

2. As bounds to the cards or curtains of comb, etc. It is pertinent here to inquire how bees develop their combs in a state of nature, or when their natural working instincts and habits have free and full play uncontrolled by confinement of any kind.

This is sometimes seen even at the North, where bees have been known to establish homes in the open air, or in buildings, attaching their combs to a branch, log, ceiling, or other objects. The operation of comb-building is very interesting.

Having located, clustered, and provided wax to begin with, one comb is started and soon another beside it, which are rapidly extended outwards and downwards until two more are needed, one on each side to fill the circle. And so the work goes on to the close of the season, or until as many combs are provided as the colony can occupy with brood and stores. The depth of the two central combs will equal or exceed their length. The side combs gradually recede in depth and length in about an equal ratio.

If, now, a cylinder of suitable diameter, and of a length equal to its diameter be placed around these combs, and the bees allowed to fasten and complete them, we shall have a hive well suited to the wants of the bees, but not of the best form for the bee-keeper. Trim these combs to a square form; place a square box of suitable size around them, and we have a hive better adapted to the requirements of the bee-keeper, and not objectionable to the bees. Divide this box into diagonal sections corresponding to the curtains of comb, taking out the bee-space between each, and you gain an idea of frames constructed on scientific principles, coming near to nature and near to right.

3. Fix these frames to the bottom-board in a proper manner, and any even number will form a complete skeleton hive, which may be enlarged or contracted at will "on all sides alike," by the addition or removal of frames. Is not this near to nature and near to right?

4. This skeleton hive may be covered with sections or frames on top and on all sides, and thus "supplying abundant room for surplus storage as near as possible to the brood combs, with free continuous passages." Is any system nearer nature,—nearer right?

This is a great subject, a full discussion of which would require a volume, or a series of articles, and must wait. If what I have written shall excite and direct thought and investigation, it is all I have aimed at.

South Northfield, Vt.

For the American Bee Journal.

Artificial Comb Honey.

A. J. HATFIELD.

On reading an article, on page 87, by C. R. Isham, I was reminded of several instances while attending the Northern Indiana Fair, last fall, and on different occasions since, when in conversation with persons in regard to honey, of being asked: "How is artificial honey made?" I assured them that it was an impossibility to make artificial comb honey; but they invariably replied that it must be manufactured, for they had read of it in the papers. In some instances it was impossible to convince them otherwise. As this false impression prevails all over the country, it is working serious damage to the honey trade; and as it seems impossible to induce the press, generally, of the country to correct the lie, the thought is suggested that the only way to set the matter right, would be for the bee-keepers of America to bring suit against Prof. Wiley for libel. This suit to be brought about by the North American Bee-Keepers' Association, or in any other way that might be thought best; and in any case supported by contributions from $1 to $5, by bee-keepers. Although no damages might be collected, the matter could thus be set right before the public. I give this as a suggestion to those who are better posted than myself, to think of.

New Carlisle, Ind.

For the American Bee Journal.

Brown Bees vs. Italians.

GEORGE B. PETERS.

In the "Hive and Honey Bee" of our Nestor, will be found a comparison of the different qualities of the Italian and black bees.

In this climate we have a native bee, which has a well defined brown color when in cluster, and so different in character from the "little black bee" described by authors, that I suppose the brown bee is as little like it as the Italian; and, therefore, I assume the brown bee is as much a distinct species as the black, Italian, or Cyprian bee.

Believing Mr. Langstroth has faithfully delineated the characteristics of the two races, I will mention the different habitudes of the brown bee as distinguished from the Italian.

1. IRASCIBILITY.—The brown bee, when handled with the same care as the Italian, is decidedly more docile and harmless. I have kept bees for 50 years, and as long as I had only brown bees, I never knew what a bee veil or gloves were; never used smoking wood, or any other defense until within the last 20 years, since I, in part, adopted the Italian bee, during which time I have found all of these articles of defense absolutely necessary. I can truthfully assert that I have been more sorely punished in one day by ill-natured Italians than I ever was in the 50 years of intercourse with the brown bee, all put together.

2. QUIETUDE IN HANDLING.—The brown bee is much more restless during work in the interior of the hive, and will not adhere to the combs nearly so steadily as their Italian cousins, making it more difficult to find a brown queen than an Italian one, whose workers remain steadfast on the combs during the examination.

3. ABSCONDING PROPENSITY.—The brown bee is decidedly less disposed to abscond than the Italian bee.

The latter is restless during the swarming impulse, and continues so for some time after they are hived; and their restless disposition causes them to scout for a new home sometimes, even after they are hived and placed on their stands. I have witnessed some facts which warrant this conclusion.

4. Honey Gathering.—The brown bee is greatly superior to the Italian as a honey gatherer during the spring and early summer; but after July 1, or about that time, they become comparatively indolent; while the Italian continues her vocation with unabated energy, and stores perhaps more honey in September than during any other month in the year, in this latitude. It is during September, with us, that the Italians, on account of bountiful stores, are apt to exhaust their hives by over-swarming; and the vigilance of the bee-keeper is never more in demand to prevent it. On the contrary, the brown bee rarely, if ever, swarms after the first month of summer has passed; no late robbing, or taking away of surplus sections, will induce them to equal their spring work.

5. Comb Building.—The combs built by the brown bees in the spring of the year, is much more abundant and more regular than those built by Italians; and when filled with honey, is decidedly white and more beautiful; but in the fall months the tables are turned, except as to regularity and beauty.

6. Working in Supers.—Every producer of comb honey knows how difficult it sometimes is, to get Italian bees to build in surplus sections. He also knows that the brown bee will begin work in them just as soon as the nursery department can detail a force sufficient to carry on the work. This quality alone, with the producer of comb honey, makes the brown bee pre-eminent, and unequalled by the Italian or any other known race of bees.

The foregoing characteristic features of the two races of bees are clearly marked in this latitude, if in no other region; and I doubt not that every bee-keeper of ordinary powers of observation, has witnessed these traits over and over again.

I have many grades of mixed blood in my apiary, and I think the misnamed hybrid, having about ¼ Italian and ¾ brown-bee-blood, makes the best honey-producers that the new industry has yet developed.

Some eminent apiculturist advocates the culture of the most energetic and prolific queens and their progeny. That is a declaration that some queens are indolent and worthless. Some emblazon their favorites with "bloated promises," but too soon these are followed by "lank performance." Our leading idea should be to investigate, and adopt the truth in whatever habiliments we find it, and to improve and foster everything that promises to advance the prosperity of apiculture.

Peters, Ark.

[Many confound the brown and black bees, calling them "natives."—Ed.]

For the American Bee Journal.

Northeastern Michigan Convention.

The Northeastern Michigan Bee-Keepers' Association held its second annual meeting March 5, at Lapeer. The meeting was an interesting one, and for a local gathering, well attended. Thirty-six members paid their annual dues. The display of apiarian implements and products, although not quite so large as that shown at the first meeting of the society, was very creditable.

The convention was called to order at 10:30 a. m. by President Taylor. The Sec. and Treasurer's reports were read and accepted. The President then called upon members to give their experience in wintering bees.

August Keoppen: Have a good warm hive, and the bees will winter all right.

Byron Walker: I am using some hives, this winter, that have a removable, protective, outer shell of a peculiar kind of building paper; but I think that the character of their winter stores has more to do with the successful wintering of bees than any thing else.

W. F. Card: Bees in box-hives full of cracks and openings, often winter better than those in well-made and painted, movable comb hives.

Sec. Hutchinson: For two winters I have successfully wintered bees by burying them below the frost-line. I simply dig a trench on a sandy hillside, fill it with dry straw, lay fence posts across the trench, then boards upon the posts, and place the hives in rows upon the boards. Straw is then placed around the hives; fence posts placed with their upper ends together, like the rafter in a building; over the hives, straw a foot deep is put over the posts, and then earth is shoveled on to the depth of two feet. No opening is left for ventilation.

W. Wray: I buried 2 colonies one year ago; gave them a little ventilation, and they wintered well. Last fall I buried 54 colonies; but, of course, I cannot tell now how they are wintering.

C. E. Rulison: I once buried 6 colonies, and only 3 lived. There was but little ventilation, and the combs were very moldy. I have tried extracting all the honey in the fall, from a few colonies, and feeding them a syrup made from granulated sugar. Three colonies were left unprotected. The bees scarcely flew during the winter, but came through in the best condition.

M. D. York: I am satisfied that bees in chaff hives can be shut up too close. Bees that were too warm, and so uneasy that they hung out at the entrance, I have quieted by simply raising the chaff cushions over them. I have one colony in the cellar that is in good condition.

Ira Green: To one man, who once successfully wintered his whole apiary, while others met with heavy losses, I paid $500 to learn the secret of his success. It was this: plenty of upward ventilation.

Secretary: If ventilation is so essential to success, how did Prof. Cook succeed so admirably when he hermetically sealed up 2 colonies by pouring water over the hives and allowing it to freeze?

Adjourned until 1:30 p. m.

The President called to order at 1:30 p. m. The Secretary read an essay by Dr. L. C. Whiting. Subject: "The Production of Comb Honey," which will appear in the next Bee Journal.

Mr. Walker: I shall, this season, use a case having glass on one side only, to determine if bees object to working next to glass.

L. D. Gray: By sawing empty sections into several pieces, and putting 3 pieces between the bulged sections, I can crate them without trouble.

C. E. Rulison: For several years I considered separators a necessity, but the experiments of the last year or two, have compelled me to admit that they can be dispensed with.

Mr. York: I have found, by experiment, that bees do not commence work so readily when separators are used. I used separators one year on part of my hives. Those without separators commenced work in the sections, and the combs were partly completed before those with separators had commenced work. I then gave some of the partly-finished sections to those having separators, which started the bees to work; but those without separators finished new sections given them at the time of the removal, sooner than the removed and partly filled sections were finished between separators. I shall also discard the wide frames. The sections are difficult of removal. An upper story filled with wide frames is too much room to give at one time. The lower tier of sections is filled, and becomes travel stained before the upper tier is completed. Of course if wide frames only one tier of sections high are used, this trouble is obviated; but such a course brings in too much complication, and too much manipulation.

The President had laid aside wide frames for the same reason. He had tried different styles of cases, but preferred the Heddon case.

Mr. Walker preferred a combined case and shipping crate of his own make that could be used either in the middle of the brood-nest, at one side, or over it.

The Secretary preferred the Heddon hive, case, and system of management. He objected to Mr. Walker's case upon the grounds that sections of different widths could not be used; that an outer case must be used over it; and that a cheaper shipping crate could be furnished. He also thought that, in order to secure the highest price, propolis should be scraped from the sections, and honey should be graded; and unless removed from the crate, some of the honey would be of a mixed character. He saw no necessity of ever placing sections inside of the brood-nest; if the brood-nest was of such a size that the queen could keep it filled with brood; and if it was full of bees and brood when the honey harvest opened, and boxes were placed upon the hive, the honey would of necessity be stored in the boxes.

"Cane sugar for winter stores," was the title of an essay read by the Secretary. He had experimented several years in substituting a syrup made from granulated sugar for natural stores. Some years the bees wintered all alike; in others there was a decided superiority in favor of the sugar.

R. L. Taylor: Mr. D. A. Jones feeds the syrup as early as he can in order that it may be sealed before cold weather. To retain the heat inside the hive as much as possible, he keeps the entrances nearly closed during the day, and entirely closed during the night.

Mr. Keoppen: What is the use of extracting the honey in the fall and feeding sugar, when it is so difficult to sell the honey? The sugar costs as much, if not more than the honey, and is no better.

President: It is of no use to those who never lose any bees in wintering them; but for those who do, and who can save them by so doing, it is a profitable operation.

Mr. Rulison: I have extracted 100 pounds of fall honey, and sold it at 12½ cents per pound; bought granulated sugar at 9 cents per pound and made 3 pounds of syrup from every 2 pounds of sugar, making a profit of $6.50.

Mr. Wray: If it is improper food that kills the bees, why is it that bees in the same apiary with the same stores, and the same treatment, stand the winter so differently?

Secretary: How can we know that all the colonies of one apiary have the same kind of stores?

Mr. Wray: If the bees gather from the same localities, why is not the honey the same?

Secretary: It is seldom that all the colonies of an apiary are of the same age. Some of the older colonies may have stores 2 or 3 years old, and, consequently, of a different character. Each colony of an apiary does not always gather from exactly the same source as the others. Italians will gather from red clover, while, perhaps, the blacks are working on buckwheat. In some such manner as this a slight diversity of stores may be accounted for.

Mr. Wray: Why is it that bees in old box hives full of cracks, and left with no protection, so often come through all right; while those in well-made hives do not?

Mr. Walker: These old box-hives usually contain an abundance of old stores. In movable comb hives the best of the honey is often removed each year.

Ira Green: As the spokes in a wheel all point to one common centre, so do the facts in wintering bees all point to ventilation as the one thing needful.

Mr. Rulison: I think the facts point to the food. With movable comb hives we take away the best honey, and let the bees fill the combs with fall honey for winter stores.

Mr. Taylor: Bees in box-hives fill up their hives with good honey, and we cannot get it away from them.

M. S. West: In the statistical table published in 1881, in the BEE JOURNAL, the bees in box-hives came out far behind the movable comb hives.

Mr. Wray: I think that moisture is often the cause of bee-diarrhœa, and lack of ventilation is the cause of moisture.

Mr. York: It is my belief that with our movable system of management, we "wear the bees out" more than with box-hives.

M. D. York read an essay on "What varieties of bees shall we keep?" which will be published next week.

Mr. Rulison: I prefer the pure Italians for all purposes. They are the best honey gatherers; they are peacable, and "death on moths." I can, by using the extractor, prevent their swarming; but I have never found anything that would keep the Syrians from swarming. I have entirely discarded the Cyprians; they are too cross for me.

Secretary: I agree with Mr. York, inasmuch that were I obliged to choose any pure race for the production of comb honey, I should choose the blacks; but I cannot afford to discard the industry and extra length of tongue of the Italians. We had a dozen or more colonies of hybrids last season, and when the Italians were swarming, they (the hybrids) were working away steadily, with a sort of quiet determination, and storing honey in combs built in the sections, without separators; but nearly as true as so many bricks. My brother or myself could quickly distinguish a case of sections that had been filled by the hybrids.

The discussion on comb foundation was prefaced by the making of foundation by Pres. Taylor, upon a Given press. Mr. Taylor preferred the press because of the thinness of the base, and the softness of the walls of the foundation made upon it; also because the foundation could be made directly on wired frames.

The President's address was excellent and appropriate, being chiefly devoted to the subject of "How to Begin Bee-Keeping." Only those who are energetic, prompt, industrious and persevering, and have a love for the business, should engage in bee-keeping. A location not already stocked with bees should be chosen, and it should be one having an abundance of those blossoms which furnish the main honey crops of the country. He advised the Langstroth hive and frame, and for the production of comb honey, the Heddon case. Beginners, to have Italians, should begin with 2 or 3 colonies, and, by practice, aided by a bee-book and paper, learn the principles of bee-culture.

Secretary: With wired frames there is certainly no necessity of having the combs fastened to the bottom bars any more than the bees do fasten them without inverting. Would it not be better to make the brood-nest of such a capacity that the queen would keep it full of brood? And then the honey will of necessity be placed in the sections. It is no trouble to keep the combs so full of brood that, were it not for the projecting ends, no one could tell the top from the bottom-bars.

The committee on exhibits made their report, then came the report of the committee on statistics; the report was as follows: Number of colonies spring of 1883, 577; fall count, 987. Number of pounds of extracted honey, 9,585; number of pounds of comb honey, 9,778; number of pounds of wax, 260.

Adjourned until 7 p. m.

The meeting was called to order at 7 p.m., by the President. Considerable time was spent in discussing foul brood, but nothing new was brought out.

Upon request, the Secretary described the method employed by Mr. D. A. Jones in securing the building of large numbers of queen-cells under the swarming impulse.

Pres. Taylor: Are not the so-called artificial queens just as good as those reared under the swarming impulse, provided the conditions are such that queen-cells are plentifully supplied with royal jelly?

Mr. Rulison: They are just as good.

"How to Prevent Swarming," was the next topic of discussion: Mr. Rulison? I prevent it by spreading the combs and using the extractor.

Secretary: Before discussing the question of how to prevent swarming, there is another question I should like to have settled, and that is: "Is it Desirable to Prevent Swarming?" I get more honey from a colony (and its increase) that swarms, than from one that does not. If I could have my choice I would have one swarm from each colony, and by practicing the plan given by Mr. Heddon, on page 126 of the BEE JOURNAL for 1883, I succeeded so well that I had only one after-swarm out of 25 swarms.

Question: "Can the Crystallization of Honey be Prevented by Heating to a High Degree?" Secretary: I saw the above inquiry in the last number of the *Country Gentleman*, and would like the opinion of the convention.

Mr. Rulison: By heating honey very hot, it can be prevented from again crystallizing; but the degree of heat required, is so high that if the honey is not burned, the essential oils are dispelled, and the flavor impaired. If the temperature is not raised above that of the boiling degree, the honey will not be injured. By applying a gentle heat for a long time, honey may be evaporated to about the consistency of dried pitch; it will remain in this state a long time, but will eventually crystallize.

The election of officers resulted as follows: President, R. L. Taylor, Lapeer; Vice-President, M. D. York, Millington; Secretary, W. Z. Hutchinson, Rogersville; Treasurer, Byron Walker, Capac.

Adjourned to meet at Vassar, the first Wednesday in February, 1885.

W. Z. HUTCHINSON, *Sec.*
R. L. TAYLOR, *Pres.*

☞ The Lucas Co. Ass'n. will meet on Saturday, May 3, at the Court house, at Chariton, Ia., at 1 p. m. A. REUSCH.

Local Convention Directory.

1884. *Time and place of Meeting.*

May 3.—Pike Co., at Pittsfield, Ill.
T. C. Bunker, Sec.

May 3.—Progressive, at Bedford, O.
J. R. Reed, Sec.

May 6.—Tippecanoe Co., at Lafayette, Ind.
Mrs. Jas. L. Havens, Sec.

May 6.—Cattaraugus Co. N.Y., at Randolph, N.Y.
W. A. Shewman.

May 6.—Southern Wisconsin, at Janesville.
J. T. Pomeroy, Sec.

May 13.—Cortland Union, at Cortland, N. Y.
M. E. Darby, Sec.

May 15.—Tuscarawas Co. O., at Port Washington, O.
A. A. Fradenburg.

May 16.—N. E. Kansas, at Hiawatha, Kans.
L. C. Clark, Sec.

May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

A Visitor from England.

I hope to have the pleasure of a visit to Montreal, in August next, when the British Association meets; and after the work of the society is over, I should much enjoy a visit to some large apiaries. As I do not happen to know any one interested in bees in America, might I ask some one to send me a list of apiaries which are worth seeing; indeed, any information on this subject will be thankfully accepted by

C. P. Ogilvie, F. L. S.,
Sizewell House, Leiston, Suffolk, England.

Wintering without Loss.

On April 17, I took my 20 colonies of bees out of the cellar, in excellent condition, without a loss of more than 4 quarts of dead bees. Every colony lived through the winter all right.

A. L. P. Loomis.
Rosendale, Wis., April 21, 1884.

Unsealed Sour Honey.

I removed my bees from the cellar during the latter part of March. Out of 29 colonies put into it, I have left 20 strong ones, 4 weak, and 1 bushel of dead bees. I wintered one on its summer stand without any protection save an enameled sheet over the frames, and during the extreme cold weather, shoveled snow over the hive. This colony is the only one free from diarrhœa. I removed as much pollen as possible in the fall. There was no signs of brood in any of those which died, but there was some brood-rearing going on in those which came through all right. Those having the most capped honey fared the best, while all that died had unsealed sour honey. I think sour honey is the cause of all the trouble about bee-diarrhœa; and bees will eat it even though they have plenty of capped honey. Bees are doing very well, considering the cold, wet weather we have been having. I tried feeding rye and Graham flour, but the bees would not touch it. They gathered plenty of pollen from elm trees during the past few weeks. Fruit bloom opened up on the 18th, but it was too cold for the bees to improve it, the temperature being as low as 42° above zero all day.

Richard Grinsell.
Baden, Mo., April 21, 1884.

Aged Queens.

On page 104, I see a statement about a queen being 11 years old. This reminds me of an old man in this county who has kept bees all his life, and who had a queen 16 years old. While exhibiting an Italian queen at our County Fairs, in 1864 and 1865, he wanted to see the new kind of bees and queen. I had heard of him before, so I told him to go to the observation hive and see if he could find the queen. He did so, and soon found her. He then told those standing around, that he had kept a queen until she was 16 years old; that he had kept track of her from the time she came off with a second swarm; and the 16th year she began to fail so much that he killed the bees with brimstone, and hunted out the old queen to see what she looked like; and he said that she was so old she was as black as his hat; and that she was the blackest queen he had ever seen.

R. R. Murphy.
Garden Plains, Ill.

Bees in Good Condition.

My 27 colonies of bees came out in good condition. Three are queenless, but full of bees. I wintered 14 colonies out-of-doors in chaff hives, and 13 colonies in the cellar. The 14 consumed from 30 to 40 pounds of honey per colony; and the 13 from 10 to 15 pounds per colony.

C. W. Johnson.
Norwood, Mich., April 17, 1884.

Wintering on Unsealed Honey.

Myself and son began the season of 1883 with 80 colonies in fair condition; and by feeding honey in combs saved from the previous season, they became very strong by the time of white clover bloom, which was quite abundant; but the weather was too cold for the secretion of honey in quantity, and as basswood was nearly a failure, and fall flowers withered on account of dry weather and early frosts, we got but 2,500 pounds of extracted honey, and 1,000 pounds of comb honey; having to feed back 500 pounds for winter stores; so that our average per colony, spring count, was but about 37½ pounds. In 1882, our average yield, per colony, was 120 pounds, spring count. Dec. 3, we put into the cellar 133 colonies, and packed 9 in sawdust on the summer stands outside; so far all are doing nicely. Those outside had a flight Feb. 2. Our cellar has ranged in temperature from 34° to 39°; the bees are very quiet, and but few dead ones are found on the floor. The entrances are open full width; no cover except quilts, and they are so arranged that there is ½ inch opening at the back of each hive. The hives are tiered up 4 high, with strips of wood between at each end for ventilation. One year ago we wintered our bees in the same manner, without loss, though a few old queens died after they were taken out of the cellar April 10. Many of our colonies had quite an amount of unsealed honey in the hives when put away, owing to the cool weather preventing the bees from evaporating and sealing it after breeding; but so far no bad effects are apparent from it. In preparing our bees for winter, combs with a very large proportion of pollen were removed, and replaced by others with little or none in them.

A. J. Hatfield.
New Carlisle, Ind., Feb. 7, 1884.

No Diarrhœa.

On April 16, after a confinement of 156 days, I placed my bees on the summer stands. All the colonies are strong, and no signs of diarrhœa. The spring bids fair to be an early one, and every thing is looking well for this time of the year.

F. M. Taintor.
Elm Grove, Mass., April 17, 1884.

Testing Thermometers.

Thermometers are extensively used to indicate the state of the temperature in bee-repositories, cellars, etc. Are thermometers correct instruments with which to test an element so changeable as air? When the weight and measure inspector tests scales, some draw quicker and sharper than others, and do not weigh alike. I think the thermometer, to a certain extent, resembles the scales in correctness. On Niagara Peninsula are vast variations in the temperature as shown by different thermometers; so much so, that at times it is difficult to ascertain which one is correct. On Sept. 15 and 16, 1882, at one time, thermometers indicated all the way from 90° to 104° above zero. On Jan. 22, 1884, within a radius of 16 miles, thermometers indicated from 14° to 42° below zero. Why this variation? Suppose a poultry-keeper hatching eggs in an incubator, was depending on his thermometer to indicate 103° above zero (the proper temperature at which to hatch eggs), and it happened to be 8° too low, making the real temperature 111° above zero, the eggs in the incubator would be scalded, and thus worthless. Will some one who thoroughly understands thermometers, explain how we can know when they are correct?

Joseph M. Wismer.
Jordan Station, Ont.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Questions about Foundation.

Will Mr. Heddon please answer the following:

1. How is the lye, that adheres to the sheets when using the Given press, best removed from the foundation?
2. Is it in any way detrimental to the foundation if not removed?
3. What is the best method of lubricating the dies with concentrated lye?
4. Is the die-book less inclined to stick to the foundation if kept bright?
5. Is it an easy matter to keep the dies so they will press all parts of the sheet exactly alike, so that no difference in thickness of base can be seen?

SUBSCRIBER.

Pine Plains, N. Y., April 10, 1884.

ANSWERS.—1. By passing the sheet through water.

2. If not removed, it will precipitate, leaving a white powder that will lose all its strength in a few days, and be quickly brushed off by the bees, doing no harm whatever, except to frighten the inexperienced.

3. We used to use the lye so strong that it would very quickly eat up a brush, or other substance used to distribute it. We used to wish for a very fine wire brush. We now use sal-soda or lye so very weak that it does not eat a common brush.

4. Yes, generally; though I have known the book to work quite nicely when the dies were black.

5. Yes; by tacking on strips of tin over the places where the impression is dull till the impression all comes alike.

Abnormal Swarming.

1. What causes bees to swarm out of the hive during this month?

O. CROWELL.

Hamlet, N. Y., April 15, 1884.

ANSWER.—1. Perhaps all the causes are not clearly understood by any one. Some have ascribed it to lack of pollen; but our 45 colonies entirely destitute of pollen, have offered no such antics; but remain in their hives clean and beautiful to look upon. I have found that any animal in trouble is liable to seek relief by a senseless change of base; and my opinion is, that most of such cases result from intestinal inflammation. It is wholesale spring dwindling; in other words, the milder form of bee-diarrhœa.

Is that Queen Idiotic?

I have a queen which, I think, Rev. Mr. Langstroth would term "idiotic." She has the appearance, in depositing her eggs, of a laying worker, viz: depositing more than one in a cell; however, the cells seem to be uniformly occupied; and her eggs, when hatched, produce worker larvæ.

1. What is the cause of this state of affairs?
2. Would it do to leave her alone until later in the season, and then supersede her? If not, what would you advise doing?
3. About what do you consider an average yield of honey in a fair locality, in about your latitude, for a colony of bees in a movable comb hive, and receiving what attention they require? From reports, I find this rather a difficult matter to ascertain.

A. E. HOSHAL.

Allanburgh, Ont.

ANSWERS.—1. To account for and find first causes for such actions is quite difficult. We have had such queens afterwards to become all right, but none of such late years.

2. I would advise trying her a while before superseding.

3. It is well-nigh impossible to give a sensible answer; for there is so much difference in seasons and colonies. I have obtained as much as 410 pounds of surplus honey from one colony that did not swarm; 48 pounds of which was comb, and the balance extracted. I took 29 pounds 13 ounces of extracted honey (not ripe) from one colony; all stored in empty combs in 24 hours, or about 14 working hours; all from basswood, and was mostly gathered 4 miles distant. These, however, are only possibilities. The proper question, however, is not "how much surplus honey per hive;" but how much surplus per field, or area; and how much capital and labor to get it, the best number of colonies, etc.

Convention Notices.

☞ A bee-keepers' association is to be organized in Western New York on Tuesday, May 6, 1884, at Randolph, Cattaraugus County. In this southern-tier district there are a large number engaged in bee-keeping, and an association of this kind has long been needed. A general invitation is extended to all interested in bee-keeping.

W. A. SHEWMAN.

☞ The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyahoga County, O. All interested are invited. J. R. REED, *Sec.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884.

JONATHAN STEWART, *Sec.*

☞ The Bee-Keepers of Tippecanoe and adjoining Counties, will hold their regular quarterly meeting at room No. 3, in Purdue College, in the city of Lafayette, Ind., on May 6, 1884. All lovers of the honey bees are respectfully invited to be present and take part in the discussions.

MRS. JAS. L. HAVENS, *Sec.*

DR. L. SNYDER, *Pres.*

☞ The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers' association. All are earnestly invited to attend.

A. A. FRADENBURG.

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 28, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 14@16c. Dark and second quality, 13@14c; extracted white clover in kegs and barrels, 8@9c.

BEESWAX—Prime yellow, 34@35c.

THURBER, WHYLAND & CO.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirous of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Demand for comb honey good, with lower prices: 15@16c for choice 1 and 2 lb. sections. Dark and broken or irregular comb, slow at 10@12½c. The liberal receipts of comb honey from New York State have cast much Western honey in the shade, and our Western producers will have to look to their laurels. There have been thousands of pounds of Eastern honey marketed here this season, and almost every comb has been perfect in every respect. It is hard to sell the unsightly stuff that I am receiving daily from other sources, by the side of this handsome honey from the East. Extracted in fair demand, at 8@9c, according to quality and color.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Market is dull, offerings being small, and the demand light. Not until there are free arrivals of new is it likely that the market will present any specially noteworthy features. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is unchanged with us. There is a continued steady demand for choice white 1 lb. sections at 18c; 2 lbs. move more slowly at 16@17c; but for second quality there seems to be no demand. Our supplies of 1 lb. are kept well down. Extracted does not sell at all at any price.

BEESWAX—Wanted at 35c.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 17@18c; extracted, 7½@8½c.

GEO. W. MEAD & CO., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will be 50 cents.

☞ The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ Cook's Manual in cloth and the Weekly Bee Journal for one year will be sent for $3. Manual and Monthly, $2.00. We have no more of the old edition left, and, therefore, the club price of that edition at $2.75, is withdrawn.

◆

Sample Copies of the American Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview. by sending the names to this office.

◆

☞ Letters for publication must be written on a separate piece of paper from items of business.

◆

☞ We have a few photographs (cabinet size) just taken, of the Rev. L. L. Langstroth, which we can send to those desiring them, for 50 cts. each postage prepaid.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
Geo. B. Peters, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.--No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,
Lock box 995, Belleville, St. Clair Co., Ills.
18A13t 6B3t

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY,** Wenham, Mass.

STANLEY'S AUTOMATIC
HONEY EXTRACTOR.

Reverses the combs without the aid of the hands; the reverse motion of the crank is all that is required. No time is lost, as we provide every machine with a brake to stop the motion, and the combs are half reversed when the motion stops. Can be used for 2 or 4 combs, as desired. No chance for combs to fall or get injured. The Comb Baskets always stop in the most convenient position for removing or putting in combs. We use XXXX Tin or Galvanized Iron for Cans. The Cylinder of Can is all in one piece. We challenge any Extractor, taking any number of combs, to do one-half the work of our 4-frame Machine. Prices reasonable.

☞ We want to employ good live Agents everywhere. Address,

G. W. STANLEY & BRO
14Atf WYOMING, N. Y.

Italian Queens! Nuclei.
SECOND TO NONE! ORDER NOW!

I rear my QUEENS by the best methods and from the best stocks for business. I send out no Queens that I would not keep in my own apiary. To convince you, send me an order. I will please you.

Queens, untested in June, $1.50; July..$1.25
" tested in " 2.50; " .. 2.00
Nuclei, 1 frame (large) June or July.... 1.00
" 2 " (large) " " " 2.00
" 3 " (large) " " " 2.50

Price of Queen to be added to prices of Nuclei. Will give special rates to parties who want two or three Nuclei with tested or untested Queens. Address,

W. C. LESTER,
Washington Hollow, Dutchess Co., N. Y.

E. T. LEWIS & CO., Toledo, O.,
MANUFACTURERS OF
All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

—THE—
VICTOR HIVE

is operated upon a new principle by which the sections are placed in vertical lines with the brood frames; continuous passages being effected in a

Practical Manner!

It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

The Eureka Wiring Tool

For pressing wire into Foundation. **Price,** by mail, **50 cents.** Don't fail to send for Circulars. Foundation for sale.
17Atf **C. M. RULAND, Rockton, Ill.**

65 *ENGRAVINGS*
THE HORSE,
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

For Sale!

Eleven hundred lbs. of Beeswax.

J. C. CONVERSE,
16A3t **Ravenna, Portage Co., Ohio.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

DR. FOOTE'S
HAND BOOK OF HEALTH,
Hints and Ready Recipes,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

DOUGHERTY & McKEE,
Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

BEE-**KEEPERS,** before ordering your
APIARIAN SUPPLIES,
Send for our large Illustrated Catalogue, sent free to any address.
10A24t **E. KRETCHMER, Coburg, Iowa.**

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address Stinson & Co., Portland, Maine.
4Aly

Italian Bees and Queens For Sale.

Tested Queens, May, $3.00; June, $2.50; after July 1, $2.00 each. Untested, after June 1, $1.00; 6 for $5.40. Full colonies in May, $7.00; 2 for $13.00; 10 for $60.00. After June 1, $1.00 less each colony. Satisfaction guaranteed. I. S. CROWFOOT,
12A8t Hartford, Wis., April 1, 1884.

NEW AND USEFUL
Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

American Linden or Basswood

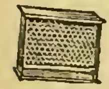
FOR BEES!

5 to 10 inches, per 100....................$1.50.
3 to 5 feet, per 100....................7.00.

For sale by **Z. K. JEWETT**, SPARTA, WIS.
12A6t 4B2t

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & CO., Augusta, Maine. 4A1y

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Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

32ABtf **J. VANDERVORT**, Laceyville, Pa.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

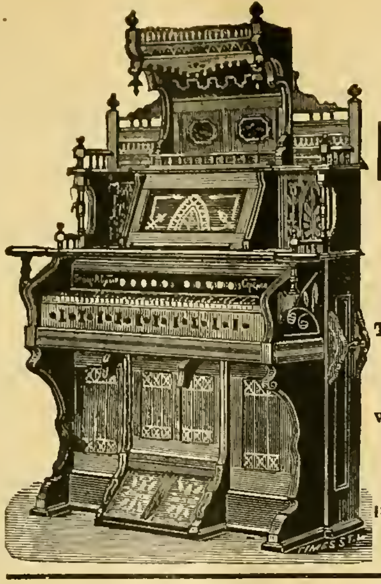
APIARY FOR SALE CHEAP.

A one-third interest in an Apiary of 75 colonies in good condition, 100 new Hives, 2 Extractors, and all necessary Implements. Best location for an apiary in the State; cheap for cash; possession given immediately. For particulars address with stamp, S. D. BATES, box 109, New Madrid, Mo.
17A2t

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
Mathushek,
Simpson & Co.,
Story & Camp.

Estey,
Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street,
CHICAGO.

203 N. Fifth Street,
ST. LOUIS.

NEW Vegetables
A Specialty.
GREGORY'S SEED CATALOGUE
1854.–1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all.
JAMES J. H. GREGORY, SEED GROWER, MARBLEHEAD, MASS.

Bingham Smoker

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,
G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,
T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

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Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.
7A13t **H. C. WHITE, MADISON, IND.**

HELP WANTED.—1 agent wanted in every place to sell our new goods. Big pay. 40 samples only 10c. None free. Cut this out. Acme Novelty Co., Clintonville, Conn.
13A8t

PURE PLYMOUTHROCK EGGS,

Per setting of 13 each, $1.00. Dry land Goose Eggs, per setting of 6 each, 75 cents.
17A2t **E. C. FARQUHAR**, Carlos City, Ind.

ITALIAN BEES

AT BED ROCK PRICES.

COLONIES—8 Langstroth Frames, in light shipping box	$ 4.50
8 Thomas Frames, in light shipping box	3.00
NUCLEI—2 or more, with tested queen	2.00
2 or more, with untested queen	1.50
QUEENS—Tested, by mail	2.00
Untested, by mail	1.00

After June 1st, 25 per cent. off.

After June 1, tested, per dozen	12.00
After June 1, untested, per dozen	9.00

Reared from Imported or Selected home-bred Mothers. No Foul Brood ever known here. Address, **C. WEEKS,**
17A4t CLIFTON, Wayne Co., TENN.

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

CHEAP! CHEAP!

Full Colonies. Nuclei and Italian Queens. Send for Price List before buying elsewhere.
DAN. WHITE, New London, Ohio.
18A5t 5B1t

For Bees, Queens,

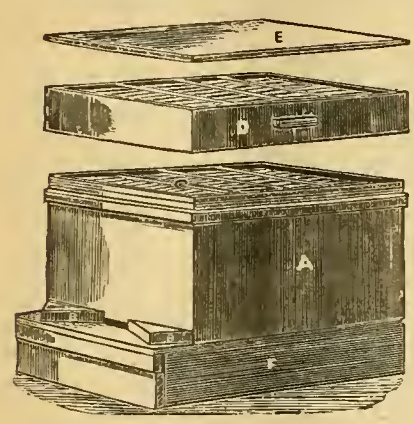
Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to
FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

1868. 1884.

HEDDON'S COLUMN.



My New Langstroth Hive.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey..........................$3.00
The above Hive complete for both in one.................................. 4.50
One Hive in the flat.................. 2.00
Five or over, each 1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

COMB FOUNDATION.

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ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., May 7, 1884.

VOL. XX.—No. 19.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
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925 West Madison Street., **Chicago, Ill.**

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☞ "Home Science" is the title of a new serial, published by S. R. Hopkins, 29 Warren St., New York, and by Sir Partridge & Co., London, at 25 cents a number. The first number is on our desk, and contains articles from the pen of Rev. T. DeWitt Talmage, D. D.; Rev. Robert Collyer, D. D.; Prof. E. P. Thwing, Ph. D.; Dio Lewis, M. D., and others. It is beautifully printed, well edited, well worth the price, and we wish it much success.

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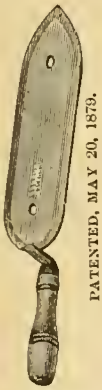

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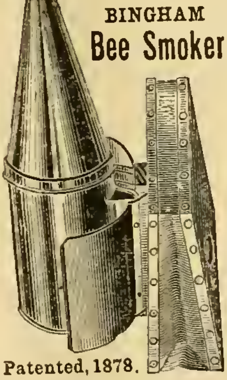

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Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English and German.** Price for either edition, **5c.;** per dozen, **40c.**

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Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, **75c.**

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, **25c.**

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Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, $1.00; for 100 colonies, $1.25; for 200 colonies, $1.50.

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THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., MAY 7, 1884. No. 19.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Foul Brood and the Neb. Convention.

At the last meeting of the Nebraska Bee-Keepers' Association, as reported in the BEE JOURNAL for Jan. 23, a committee was appointed to investigate the cause of the existence of foul brood in that State, and to confer with the Authorities in regard to its suppression by legal measures. The Committee, after much deliberation and correspondence, have made the following report, which has been adopted by the State Association:

To the President and members of the Nebraska Bee-Keepers' Association.

LINCOLN, Jan. 10, 1884.

WHEREAS, The disease of bees known as foul brood, is regarded as one of the most malignant of bee maladies, often destroying whole apiaries despite the efforts of the apiarists, and

WHEREAS, The disease is known to be in our state in at least three counties, and

WHEREAS, Flanagan & Illinski, of Belleville, Ill., have shipped bees to M. L. Trester, of our State, affected with foul brood, and

WHEREAS, The disease is known to be a fungus growth, and also contagious. Therefore, be it resolved by the Nebraska State Bee-Keepers' Association:

1. That the bee-keepers be earnestly requested to examine their colonies closely, whether they suspicion foul brood or not.

2. That those who expect purchasing either bees or queens, first satisfy themselves that the party from whom they purchase has not the disease in his apiary.

3. That we would recommend the most rigorous method of destroying the disease wherever found, even to the total destruction by fire of bees, comb and hives.

3. That a copy of these resolutions, together with a concise statement as to what foul brood is, be published in the leading dailies of the State, with a request that the county papers please copy, and that copies be sent to the leading bee papers and periodicals of the United States.

(Signed.) R. V. MUIR,
G. M. HAWLEY,
H. CULBERTSON,
Committee.

LINCOLN, Neb., March 1, 1884.

To the Executive Committee of the Nebraska State Bee-Keepers' Association, and all other Apiarists.

The undersigned, a committee appointed at the last annual meeting of the Nebraska State Bee-Keepers' Association to investigate the transactions in bees diseased with foul brood, beg leave to make the following report, without malice to any one, but in justice to all.

We find that foul brood has made its appearance in the central part of our State, but up to date, we have not been able to discover its origin.

We also find by the written records and correspondence of M. L. Trester, late of Greenwood, and now of Lincoln, Neb., that on July 20, 1883, he received 20 nuclei of Flanagan & Illinski, of Belleville, Ill., which has proven to have been diseased or infected with foul brood when shipped from Belleville, as shown by the following facts:

When the bees were received, each nuclei was transferred, and a written statement of the condition of each sent to the shippers, and as shown by the duplicate copy numbers 3, 7 and 11, were marked as having rotten brood; but not knowing foul brood at sight, it was watched with suspicion until Sept. 17, when it began to develop, showing it to be foul brood, when a lengthy correspondence between the receiver and the shipper was carried on (which we abbreviate as much as possible) as follows:

FLANAGAN & ILLINSKI: The bees I bought of you were infected with foul brood, and it has spread in my apiary. I expect you to make the damage good. Let me hear from you immediately.
Greenwood, Sept. 20, 1883. M. L. T.

M. L. TRESTER: Yours received, and is a great surprise to us. Trust you are mistaken; but if not, what is the damage and mode of reparation?
F. & I.

P. S.—We ought to say in self-defense, that we never saw a case of foul brood in our lives until this spring, and then it was instantly suppressed by cremating every hive. F. & I.
Belleville, Oct. 5, 1883.

M. L. T.: One of us will try and meet you at the bee-keepers' meeting in Chicago, on the 17th and 18th. Please act with caution, as any damage to our credit makes it less in our power to settle to your and our own advantage. We want to see you and talk the matter over and settle it in a friendly way. F. & I.
Belleville, Oct. 13, 1883.

F. & I.: Yours of 5th received. I want $1,000 damages, and want to see one of you in Chicago on the 17th or 18th inst. M. L. T.
Greenwood, Oct. —

Mr. Trester's memorandum here shows that he met Mr. F. in Chicago, Oct. 16 or 17, and almost F's first words were, "be cautious," as any injury to F. & I. would make them less able to pay. F. also stated that he knew that they had had foul brood in their apiary during the spring of 1883, but thought that they had eradicated it. F. told T. he could prove nothing at law, when T. told F. that he would bring the men who worked for and helped destroy the infected colonies, to prove that F. knew the dreadful tendency of the disease. F. also told T. that he had come to Chicago on purpose to see him to keep from being exposed. F. also stated that he had also sent foul brood bees to Mr. ———, Mass., who knew the disease when he saw it, and returned the bees.

T.'s memorandum shows that the matter must be made public, and insisted that F. remove his advertisement from the bee-papers and insert one in the same place, notifying the public that he would have no bees for sale for two years on account of foul brood. T. then made the following propositions:

First—That if F. & I. would pay him $500 he would call the matter settled between them.

Second—T. offered to sell F. & I. every colony of bees that may be alive April 15, 1884, also supplies on hand, value to be fixed by arbitrators.

Third—T. offered to take any amount of damage was was agreed by the arbitrators. Said arbitrators in the above cases to be chosen as follows: One by F. & I., one by T., one by the president of of the N. W. B. K. A.

Mr. F. then made a proposition that if F. & I. accept one of T.'s propositions, T. was to bind himself to keep the transactions a secret, which T.'s memorandum shows he would not agree to.

M. L. T.: After due consideration, we have concluded to send you in a few days, in cash, the amount we think is fair and right in regard to bees sent you last July. F. & I.
Belleville, Oct. 18, 1884.

F. & I.: At the time I bid adieu to Mr. F. in Chicago, I was of the understanding that as soon as he arrived at home, and you consulted together, he would write and accept one of my propositions, but all I have heard is a line saying you would send me some money to pay damage. I write this to remind you that I expect the $500 in full before the 20th of this month. M. L. T.
Greenwood, Dec. 13, 1883.

M. L. T.: You are, no doubt, tired of waiting on us. Have a little more patience. We will send you in a few days the amount we think fair and right. F. & I.
Belleville, Dec. 15.

M. L. T.: We will send you at the earliest opportunity the amount we believe to be fair and right. If you can wait until we can do this, which, we hope, will not exceed ten days, well and good. If not, all right; do as you think best in regard to the matter. F. & I.
Belleville, Dec. 31.

F. & I.: Yours of 31st inst. received. Let me hear from you before our State meeting, which convenes on Jan. 9. I am ready to place this matter in the hands of arbitrators at any moment.
Lincoln, Neb., Jan. 3, 1884. M. L. T.

M. L. T.: We send you to-day, per express, $95, which we tender you as in full of all demands to date for damage (if any) done you. Please sign the enclosed receipt and return per express and oblige. F. & I.
Belleville, Jan. 14, 1884.

Mr. Trester informs your committee that he did not accept the money on its arrival, on account of the case being placed in the hands of a committee, and in a short time F. & I. telegraphed for it to be sent back to them; but that he is still ready and willing to place the matter in the hands of arbitrators to be chosen similar to the mode proposed by him in Chicago.

Desiring to do exact justice in this very unpleasant affair, we sent the proof of the above to Flanagan &

Illinski, and asked them if they had anthing to say. If so, to send it on and have it published in the same paper, so that our readers would not be troubled with a prolonged personal controversy. The following is their reply:

The best and most careful of us are liable to blunder, and do, unintentionally, that which we would not knowingly do for any consideration. We can truthfully say that we never saw (to our knowledge) a cell of foul brood until last May. When the discovery was made, prompt and efficient measures, as we then thought, were taken to eradicate it. We were mistaken, however, as events proved, for as seen above, Mr. Trester claims that we sent him 20 nuclei, some having foul brood, and demanded *the modest sum* of $1,000 damages. At a personal interview with him at Chicago, in October, he moderated his claim to $500. On asking him, if we paid the sum demanded, whether that would be the end of the matter, he answered, "That he would not forego the pleasure of exposing us, if we paid him $1,000." All this because, by accident or oversight, we had unfortunately sent him a few (2 or 3 perhaps out of 20) nuclei (taking his word for it) infected with foul brood.

After consulting some of the best bee-keepers of our country, who had been troubled by this disease, and had been successful in getting rid of it, and after carefully weighing the whole matter, we deemed it fair and right to return the purchase money, and we sent him $95, the full amount received from him for 20 nuclei. This money he refused to receive, but tried to levy on, or attach it,so that he may obtain it without giving us a receipt in full of all damage; but the money was returned to us before he could accomplish his design.

At the meeting, where the foregoing resolutions were passed, his denunciations, etc., were so violent, that when strangers to us, who did not like such unfair treatment, tried to take our part, they were speedily "sat down on." These facts are susceptible of proof; and show, better than any words of ours, the spirit which actuated him.

Any man of business can see that, to knowingly sell diseased bees would be suicidal, and would justly result in utter ruin, financially and otherwise. We have too many thousands of dollars invested in this business, and our reputation is too dear to us, to be guilty of such folly. We certainly are as much interested in the suppression of this pest as any one can be, and perhaps more so, as our interests are larger. It is very unjust to report that we are scattering it through the land. Flanagan & Illinski.

Belleville, Ill., April 25, 1884.

P. S. I wish to add that if any one has blundered, any mistake made, or any one wronged, that I alone am to blame for it, and that my partner, A. X. Illinski, M. D., is not responsible for my mistakes, as I have had the entire control and management of the business, and if any are blame-worthy, it is I. I make this statement without the Doctor's knowledge, because I deem it but just. I will also say that had I acted with ordinary judgment, I would have laid the whole matter before the Northwestern Association, held in Chicago last October, and I regret exceedingly that I did not do so. I have tried to act fairly, and have nothing to take back or deny. E. T. Flanagan.

Having given both sides of this controversy, we cannot consent to burden our columns with any arguments *pro* or *con*. The disease is much to be dreaded, and the action of the Convention in taking measures to "stamp it out," is praise-worthy, and in the interest of the bee-keeping public. To do this, and still preserve friendly feelings on all sides, is quite an undertaking—perhaps an impossibility. The only way to arrive at an amicable adjustment, is for each one interested to do exactly as he would be done by; and when stipulating for that adjustment, to "put himself in the other's place."

SELECTIONS FROM OUR LETTER BOX

Dry Sugar for Bees.

On page 245, Mr. H. Richey has credited me with a wrong statement. He quoted me thus: "Mr. Henry Alley thinks dry sugar is the best food for bees, if water also be given." If Mr. R. will read my article again, he will see that I made no such statement. Mr. R. recommends syrup made from granulated sugar and water, for wintering bees. Well, I know that is good, and said so, certainly 20 years ago, as Mr. R. will find if he will look over the Bee Journal as far back as that time. If it were not for sugar, I could not winter my bees sometimes. That is all the food they have had here for the past two years. Henry Alley.

Wenham, Mass., April 23, 1884.

My Bees are Booming.

The bees in this locality are doing splendidly now. I put into the cellar, last fall, 54 colonies, some of them rather scant in stores. This spring I took out 51 alive, and 3 of which were quite weak. Of the 3 I lost, the rats destroyed 1, and 2 starved. There was no diarrhœa, except a little in 2 colonies, which have done well since they were set on the summer stands. I have sold 8 colonies, leaving me 40 in healthy condition, and which are now booming. The prospects are splendid for a general good time with the pets this year. H. J. Scoles.

Knoxville, Iowa, April 26, 1884.

Bees Separated all Right.

The bees which were so heated in March, separated all right, and came out without the loss of a colony, that had a queen when put into the cellar. I found 5 in the lot of 225 that did not have a bee in their hives, and in each case they had not had a queen since last June. Ira Barber.

DeKalb Junc., N. Y., April 26, 1884.

Bee-House Burned.

On April 23, my bee-house containing some fixtures, was destroyed by fire. If the wind had been in the south, my bees would have been burned, as they were within 10 feet of the house. On the same evening they were gathering pollen as if nothing had happened. Box-elder is in full bloom. H. Clark.

Palmyra, Iowa, April 25, 1884.

Dearth of Honey in Cuba.

We are having a slight dearth of honey now, the first in six months, and yet it is not what we used to experience in California; for, now the bees begin work in the morning just as soon as there is a bit of light, and work till about 8 a. m., then lay off till about 5 p. m., when honey flows again, and continue until it is so dark it would seem impossible for them to find their hives. They work with great ambition, so they are holding their own, and want does not stare them in the face very badly yet. The honey flow for the last six months has excelled any thing I ever saw in any country. I am not yet prepared to tell the readers of the Bee Journal what we have done in the way of modern bee-keeping in Cuba; but if Providence spares my health till the year is up, I will then tell to the world, through the columns of the Bee Journal, what I know about bee-keeping in the West Indies. The weekly visits of the Bee Journal are refreshing to one so far removed from home and friends, and the perusal of its pages is a rare treat; and one pleasing feature is, it never fails to come when it is due. A. W. Osburn.

San Miguel, Cuba, April 16, 1884.

Cold Spring.

Spring is backward and cold. I put 450 colonies into winter quarters, last fall. I have not yet set all of them out, and so cannot say how they have wintered, but I think the prospect is good. J. R. Turnicliff.

Van Hornersville, N. Y., April 23.

Wintered without Loss.

Our bees wintered without loss; also those we had taken out of trees and transferred to movable comb hives, wintered all right. One was taken out and transferred as late as September. Some of my neighbors have lost heavily, and some lost all. We use chaff protection. Drones are flying to-day. N. E. Cottrell.

Burdick, Ind., April 24, 1884.

CORRESPONDENCE.

For the American Bee Journal.

Anti - Monopoly.

WM. F. CLARKE.

That it is possible to overstock an apicultural area is readily admitted; but how many colonies of bees are sufficient to do it, is a point on which there is difference of opinion. I have an impression that Mr. Heddon underrates the honey-yielding capacity of his own locality, and that, while there is a substratum of truth in what he says, he betrays the over-sensitiveness of a professional specialist, and is too much enamored with the charm of monopoly. But, be this as it may, I wish to submit to Mr. Heddon and others of his way of thinking, that "locating and occupying a field" by no means covers the whole ground of this discussion. It also embraces the important point of enlarging a field by providing bee pasturage.

Mr. Heddon's article assumes that a field is to be estimated according to its honey resources as developed by accident. It does this by implication rather than by direct assertion. But, next to the question how much honey a locality will yield left to chance, there arises the question what more it may be made to yield by a judicious provision of plants that produce the luscious nectar which bees love to gather? This question has not escaped Mr. Heddon's attention. Few things do that have any bearing on apicultural success. He has bought a tract of land out of the profits of bee-keeping, and is growing a variety of honey-yielding plants. He has sown the waste places around Dowagiac, even the gravel-pits with melilot, and shows visitors, with pride, the rapidly-increasing breadth of this and other bee forage.

This may be done to almost an unlimited extent. There are districts in Germany where bee-keeping is the leading industry, and where the farming is carried on with a special eye to providing for the bees. "God bless the bees" is a common petition in the public prayers of the pastors in those localities, and as we should always try to answer our own prayers when we can, the people sow honey-producing plants, by means of which both the bees and the bee-keepers are blest. Bee-keeping is yet in its infancy in many respects, in this matter of providing bee forage among the rest, and by-and-by we shall not only ask, Is this a good field for honey-gathering, but is it capable of being made one? Or, being already good, can it be made better?

Mr. Heddon looks at this matter too exclusively from the stand-point of bee-keeping as a specialty. Now, while I believe it absurd to expect every man to be his own honey-producer, and hold that none should keep bees but those who have natural and acquired qualifications for so doing, I consider that there is a legitimate sphere for bee-keeping in a small way, in the case of many persons who are not professional apiculturists. The old British idea that bees are properly part of the live-stock of the farm, and that no farm is completely stocked unless it can boast a few hives, is, to a certain extent, correct. A mixed husbandry is the true theory of farming. There are cases in which a farmer may wisely devote his attention to some agricultural specialty, but they are few and rare, compared with those in which the true policy is to raise a variety of products. As a rule, a farm should produce not only milk, but honey. A well-managed bee-hive is as profitable as an average cow. Make allowance for the proportion of farmers who have no natural aptitude for bee-keeping, or will not qualify themselves for taking intelligent care of bees, and still there are a large number left who might easily keep 10 or 12 colonies of bees each, and find the profit of so doing a helpful item in the yearly income. Usually, there is a member of the family whose duties lie in the house, who could hive a swarm of bees; or, at any rate, watch at swarming time, and blow the horn to call the farmer up from the field when there is hiving to be done.

Besides the farmers who might keep bees on a limited scale to advantage, there is the village shoemaker who would find it a pleasant change from his bench to look after a few colonies. The woman who takes in washing, the poorly-paid school-master or minister, and a host of others. The professional gardener does not argue that because he has started a market garden in a neighborhood, others must keep out the business and people in general abstain from making gardens. Even at horticultural shows, there is a distinction recognized between the amateur and the professional, and the legitimacy of gardening on a small scale, and as a side-show, is admitted.

A woman, compelled by circumstances to wash for a living, could make more money with less toil and far more independence, by keeping 10 colonies of bees, provided she has, as many women have, a natural aptitude for bee-keeping, with the addition of the acquired knowledge and experience, and much as I like a well-ironed shirt, I should rather see her a bee-keeper than a washer woman; not because I think the latter calling menial, but because the former is less laborious, and gives more scope for intelligence and the indulgence of a lady's tastes and instincts. Mr. Heddon will, perhaps, reply that he had not these classes in view when he penned his article, but whether intended or not, it seems to me that the whole tenor of his argument is calculated to discourage the small bee-keeper; and, looking at the matter from the broad standpoint of the apicultural interest at large, I do not think it is good policy, or strict justice, to do this even undesignedly.

Well, then, to join issue fairly and squarely, let us look at the Kendall illustration. It proceeds on the assumption that where one bee-keeper (professional) locates, according to the old Scotch song, "There's nae room for twa." The same ground might be taken as to village store-keeping. It is a small place, and a merchant is already in the field. He is doing a good business. Another spies out the spot, and thinks he too will open out there. "My friend," says number one. "I can do all the trading needed here. If you start business beside me, you will seriously lessen my profits, and make very small ones yourself. I calculate to enlarge my store if necessary, and to keep pace with the growth of this village. I want to make a big thing of it, and if you commence, I will undersell you, and drive you out of the field." "Sir," says number two, "I shall be satisfied if I can make a comfortable living, and save somewhat. I like this place, believe it will grow, and think there is enough for two of us, if we are not over covetous and ambitious."

It is not a case of "the survival of the fittest," but a question whether number one shall permit another to "share in his good fare." They go to work, each having his business wits sharpened up to the keenest possible edge. Both become shrewder merchants because of the competition, both are more anxious to build up the place that each may do a better business, and after a little unfriendly rivaling, both learn to "live and let live." Human nature likes to take the cake and eat all of it; but it is often unavoidable and always benevolent to let somebody else have part of it. That we should respect the rights and interests of others, is most true, but it is not always easy to define those rights and fix those interests. It would be a long time before a village would have a second store, if the prior consent of merchant number one must be had before starting it. The fact is, there are many positions in life which can only be held by the personal ability of the occupant. Rivalry and competition cannot be prevented. We must accept the challenge of Rhoderick Dhu to Fitz James:

> "For this is Coil-and-tangle-ford,
> And thou must keep it with thy sword."

The village doctor, the village backsmith, the village hotel keeper, and last, but not least, the village clergyman, are in the same fix as Mr. Heddon. If they are as competent as he is in their several walks of life, they will hold their own as he has done, or move to "fresh fields and pastures new," as he will doubtless do, when another Heddon mightier than he shall get a footing in Dowagiac. There is too much of the white feather about this "keep-away-from Dowagiac" proclamation. I would rather hear Mr. Heddon exclaim with Fitz James:

> "Come one, come all, this rock shall fly
> From its firm base, as soon as I!"

Mr. Heddon says: "Never locate in a field already occupied," and he explains "occupied" to mean that it has already in its limits a bee-keeper who either has stocked it to its utmost capacity, or intends doing so. "Let us figure," as Mr. Heddon observes. In a given locality there is a bee-keeper who has 200 colonies, and considers that about enough for the field. This, I think, is not far from the average which Mr. H. thinks sufficient for Dowagiac. Another bee-keeper comes along. For reasons cogent to his own mind, he would like to settle in that particular spot. He surveys the field, and concludes that it is rich enough to give 500 colonies all the work they can do. Certainly he is not "mean," because he honestly holds that opinion, and if it turns out correct, he is not "mistaken." But Mr. Heddon, in advance, assigns this man a place in "the ranks of the mean or mistaken." Or, to suppose another case. In a particular spot, there is a bee-keeper with 50 colonies. These give him a better living than the mass of farmers get off 100 acres of land. Another bee-keeper, who would like to settle there, talks with this man, and finds that as fast as his means allow, he intends to increase the number of his colonies until he has fully stocked the field. Bee-keeper No. 2 reasons "thusly:" This man is making a comfortable living now. He can double or treble his present colonies, and still leave me scope enough. I can keep 100 or 150 colonies, quite as many as I care to be bothered with, and not interfere with him. Is he a very near relative "to the knave or fool" if he decides to locate there? So Mr. Heddon affirms. But I fail to see the justice of this opinion, and I think the great mass of common-sense bee-keepers will agree with me. Mr. Heddon says, "there are plenty of unoccupied areas." But there are thousands of instances in which people want to live in a particular locality. It matters nothing that "there are plenty of unoccupied areas" elsewhere. "The world is all before us where to choose," and if a man honestly believes that there is an opening for him in a place where he wants to be, and that he can settle there without improperly trenching on the rights and interests of his neighbor, is it right to hurl such epithets as "knave," "fool," "mistaken," "usurper," "mean," at his luckless head? I venture to think it is *not.*

I do not know where Mr. Heddon will rank me after he has read this article, whether among "the froth of the profession," the "self-interested," or the "honest and sincere," but I do know that I have written from the best of motives, and with no other wish than to benefit the interests of bee-keeping and bee-keepers. While I do not wish to blow a trumpet for the purpose of rallying a multitude of recruits, who, when gathered, will only increase "the awkward squad" of unsuccessful bee-keepers, I do want to see more general attention directed to bee-keeping, not only for the sake of adding to the already large army of specialists, but in order to increase the means, and add to the comforts of multitudes of people whose incomes are scanty, and who might easily supplement them by betaking themselves to bee-keeping in a small way. I will also own that I greatly prefer to have a large number of those who keep about so many bees as they can personally manage well, rather than a comparatively few monopolists who have to depend largely on hired help with the attendant disadvantages admitted by Mr. Heddon in the article I am criticising.

I prefer this for reasons similar to those which lead me to prefer the state of things on this continent, where a large number of farmers each owns his 100 acres or thereabouts, to the state of things in Britain, where a few own the entire public domain. "The greatest good to the greatest number" is what I desiderate.

Speedside, Ont.

For the American Bee Journal.

New Races of Bees—Fertile Workers.

JOHN HEWITT.

Mr. G. M. Doolittle, in the BEE JOURNAL for 1883, page 500, gives his opinion regarding these bees, and after reading his letter very carefully, I came to the conclusion that he is very much mixed about these bees, and that the new races of bees he has, are mixed also; and as there are many more people in America who have mixed bees, and are entirely in error regarding their true character, I write this hoping that it may be of some use in removing the errors and putting these bees in their true position.

The Eastern bees, bred and sent out by Mr. Benton, consist of the Cyprian, Palestine and Syrian races. Mr. D. speaks of Syrian and Palestine as identically one; but this is not so; there is more difference between them than between hybrids and Italians, both in color and disposition. How these bees came to be considered as one, I am puzzled to find out; but the error applies not only to America, but to some extent to England also.

In *Gleanings* for 1883, page 169, H. B. Harrington says: "We reared quite a number of queens from Mr. A. I. Root's Mount Lebanon queen, and as we took great pains to secure drones from our Bethlehem queen, *we think we have as pure Holy Land bees as can be found.*"

Now, if it is remembered that Mt. Lebanon is in Syria, where Mr. Benton rears his Syrian queens, and that Bethlehem is in Palestine, where he also has an apiary, it is plain that Mr. H. reared only cross-breed queens. As to that part of his statement which I have italicized, I have no doubt he is quite correct; though I think he would have found that there was a great difference, had he reared some Syrian drones as well; but this he, no doubt, prevented in order to avoid the chance of in-and-in breeding.

Prof. A. J. Cook, in the *Bee-Keepers' Magazine* for 1883, page 223, very fairly describes the Syrians; but at the end of his article, the "Ed." says: "If the word 'Syrian' is altered into 'Holy Land,' *all confusion will be avoided.*" And so the error has spread from teachers to pupils. The Syrian bees are so much like Cyprians, in fact, very much more so than Palestines, that I think it highly probable that they have been taken for each other, and so mixed up.

To describe and compare these bees one with the other, in every particular, would make this article a very long one; but to give a few features, will be advisable.

For instance, all 3 races are smaller bees than either blacks or Italians; but when crossed with either kind of drones, the offspring are of the same size, and the Syrians show the 3 yellow bands; though in the black cross the shade is darker; but still they are all evenly marked like pure Syrians. The queens of the 3 races seem duplicates of each other, and I cannot tell one from another; so I think if all 3 races were mixed and bred into each other, the queens would still look like pure ones of either race.

The Syrian drones carry an orange-colored band, but the Palestine bees do not; in fact, if it were not for the gray, fuzzy hair on them, they would pass very well for black drones. Then if you open a hive containing Syrians, when the sun shines, you may do so with impunity, without any protection, preparation, or attempt to quiet them whatever, providing they are not jarred, smoked or allowed to smell it. This is a fact which smokists cannot comprehend, thinking they must require some kind of "doctoring" to be able to manipulate them; but this is not so, for unlike blacks or Italians, they are naturally very tame, as may be proved by sitting close to a hive entrance at any time, to watch them; while the Palestines must be smoked, and then the manipulations must be quietly and quickly performed, as they quickly empty their sacs of honey, and they cannot be made to regorge themselves; at least I never could make them do so.

I will now describe the Syrian bees, as it is with these I have had the most experience. They are the ones I like the best, and they will yet make their mark. They are the most peaceable bees I have ever seen, and I should have no hesitation in placing 50 or 100 colonies around my house door without the slightest fear of any one ever being stung.

In opening them (which I always do while the sun is shining), I draw the quilt off diagonally, very gently, when up comes some bees, trying to feel the sky with their lances, and stretching upwards as much as possible to accomplish it. They are not cross when in this condition, nor if they take wing. I then commence immediately to remove the combs; and if it is June or July, I find in a full colony 28 square feet of combs full of brood in one stage or another. This brood is all in one compact mass, completely filling the frames, which are 14x10⅜ inches. The bees will be quietly sitting on it, as if nothing were going on, and being smaller than blacks, and never gorging themselves with honey, they look like a host of beautiful little flies. Those which do take wing, just buzz about without any inclination to sting, and if a comb is wanted out, all that is needed is to give it a shake, and the bees drop off into the hive bottom, and run up amongst the other combs.

The hive or combs must never be jarred; but if you want to see them savage, just smoke them, and jar the hive (like you would blacks or Italians), and I do not care how you are dressed or protected, you will be well stung.

They are the most energetic workers I have seen, and this trait is improved when a Syrian queen is mated with a black drone; but the character of the Syrian is changed with the cross, for they require a dose of very dense smoke to quiet them, but on no account must they be jarred; for when roused they are worse than pure Syrians at stinging, besides they sting deeper, draw blood, and it is much more painful. They rear and pack brood just the same, and collect more honey.

I think this will reconcile some of the very conflicting accounts of these bees, and I should think some of the bees which have been sent out for the Cyprians and Syrians, have had a fair share of Italian blood in them to stand the smoking with which Mr. D. doses them.

All my Eastern queens have been obtained direct from Mr. Benton, and every one came from her native land; so I speak with confidence as to their purity.

In the second part of Mr. D.'s letter, he condemns their brood-rearing powers, and says the secret of honey getting is to have the bees just in the niche of time. I think here he is quite at sea as to their real best nature. There have been proposals enumerated to get two queens to lay at one time in the same hive, so as to get an enormous population and economize the heat. Here the problem is practically solved; for we have one queen capable of laying double the quantity of eggs of an ordinary good one, or 26,000 per week.

Let us go a little farther. On page 69 of *Gleanings* for 1883, he writes, "Mr. Betsinger says, and I agree with him, that if we had the same number of bees in a hive in apple-bloom that we do in basswood bloom, the yield would be as great. I once had 8 pounds stored in one day with not over one-third the bees I have in basswood bloom." Is it not possible with these bees to get a colony up to its full strength in time for apple bloom?—78,000 unhatched bees, with more than twice that number in the wing state; surely they would gather much honey.

Then there is the sycamore bloom just after, which I consider the king of all in honey-producing plants; after which they might be divided for the clover, and divided again for the basswood. Some have 4 enormous colonies for that harvest, instead of one.

Suppose, for argument, that they are so savage as to be unmanageable; have not bee-keepers who keep Italians always some rather weak colonies when spring comes? And does it not strike one to exchange the queens of these, so that these savage bees can be replaced by Italians in time for the honey harvest (for he admits they winter well, and are very strong in the spring), and let the savage lot build up another colony for winter? I think the secret is, they have not been allowed sufficient room to breed in, so as to reach their full strength.

In the third paragraph, he makes an assertion, which, I am afraid, he has never proven by actual fact, but is reasoning from analogy, viz: "That fertile workers kill the young queens."

It is a fact that a large quantity of fertile workers appear in the hives after any attempt at queen-rearing. I might say hosts of them; for I have had 8 square feet of comb, egged in every cell, and some cells had upwards of 6 eggs in them, within 24 hours, with these workers; but the only serious drawback is, that no queen-cell is allowed to hatch out, being destroyed when about 14 days old. I think by reasoning on this fact, he has gotten wrong, or very likely missing the cells and finding no queen, he thinks she was killed as soon as hatched.

I find no difficulty in introducing queens to such, or uniting them with other colonies. I have never known them to kill a queen, but this I have proved; they will live on peaceably and lay their eggs side by side with a laying queen, as I have shown in the *British Bee Journal* for 1883, page 66.

What bee-keeper has not noticed a number of drones in worker cells, when a young queen commenced laying! Why? These have been laid by fertile workers only. I may here remark that some think a young queen ought to begin laying before 10 days after hatching; but this is an error, as the best queens I have had, have been those which longest delayed laying.

I once had a black queen hatched in July, which did not lay until March; and last year I had a Syrian hatched Aug. 9, which did not lay until the end of February; and both of these were fertile. I have several times found the cells filled with the production of fertile workers before the queens commenced to lay; and, no doubt, many a fine queen has been condemned as a drone layer on this account; and many a queen has been thought to have begun laying when only the workers had begun.

I had hoped, during the past summer, to be able to encourage the use of these fertile workers; but the weather spoiled my experiments.

If people will consider that every time a queen of these races is reared in their native colonies, a lot of fertile workers are also reared, and that the queens, whether virgin or mated, are not destroyed by them; or these bees would have been extinct hundreds of years ago; in fact, would be in less than five years. It will be plain that Mr. Doolittle has made a mistake in saying that they are.

As I have hinted that many of the queens doing duty for these Eastern bees, may only be mongrels, and some may think I mean to advise getting rid of them, but I do not; for no matter how they may be crossed, if they have only the Eastern blood in them, they will pay for keeping, at least until an unquestionably pure one can be afforded, and when one can be got from a source which can be depended upon for getting a genuine Simon-pure, it would be as well to compare the bees from her carefully with those already in the apiary, particularly as to size and disposition to sting when handling them; for peradventure these you have may be pure ones, and it would be a loss to throw them away.

Palestines are better than Italians, but do not come up to the Syrians; while for profit in honey, give me a Syrian queen mated with a black drone; but never attempt to keep these bees unless you are prepared to let them have sufficient breeding space. They ought to have at least 16 Langstroth frames to breed in; though if the Langstroth is used, I should prefer two rows of frames placed over each other for a brood-nest; making it really two stories high; then with a good locality, a good season, and good management, the Carroll record could be outdone in most places, for I see nothing extraordinary in it with these bees.

Sheffield, England.

For the American Bee Journal.

Supers for Surplus Comb Honey.

E. P. CHURCHILL.

I am surprised to see how any one can advise a ⅝ inch space between the top of the frames and the section case, unless he has strips to rest on the top-bars; for if there is nothing but the rim to the case, the bees must of a necessity go up only about the edges. I prefer a case to rest at the sides on a chamfered edge thin enough so that the bees can pass from the side of the hive, as they crawl up on the inside combs, which is ⅜ of an inch from the side of the hive; and unless the side of the case is beveled down to at least ⅛ of an inch, the bees are obliged to leave a passage from the outside comb.

I used them a long time before I discovered this fault. My case is a little like Root's. I use glass only on one side, and a solid ⅜ inch wood on the other, and to stiffen the rests under the boxes. I use a partition ¼ inch thick, and the bottom of the ends are ½ inch thick, and are beveled from ½ inch at the bottom to 5-16 inch at the top, so that two lengths of 4¼ boxes just fit each side of the partition; thus I can have half a case or a whole one.

I rabbet 3-16 of an inch at the ends, and ½ of an inch deep for box rests; these are 3-16 of an inch thick, and are nailed to the partition, which makes a stiff, good case, and leaves very little surface to stick to the frames. At each end of the top of the crate is a wedge to tighten the boxes; there is a bee-space of 5-16 of an inch, which is enough for a free bee-space, and they can reach the sections anywhere on the frames.

I want no more cases the full width of the hive, especially where 10-frame hives are used; but I do want a 10-frame hive for many reasons. One very important thing is to have no air-space between the two stories, as it is sure to drive the bees away from the sections. One will say it is too expensive to make a hive air-tight; but it can be made so, simply by painting the edge of the upper story and tacking on firmly 1 or 2 thicknesses of woolen cloth. I want a narrow rim around the upper story to shut down ⅜ inch over the lower story; then, with the cloth, the bees take to the outside boxes far more readily. On the case, I prefer a cushion made of leaves; for I know by experience that it is cooler on a hot day and warmer on a cool night; in short, it is a very good regulator.

I find that where no cushion is used, bees do double the gumming about the sections, especially at the sides and top next to the cloth; because nature tells them it is too cold. The hive should have not only heat but moisture to a certain extent; and a cushion supplies both.

The best cover for a hive is roofing with ventilator at each end close to the roof. Strips are tacked on the inside along under the roof, 1 inch or more down, and 5 or 6 inches wide. Burlap is tacked all around inside of the cover, but in one end in which I pack hay or excelsior; finally fastening the open end. This gives a circulation of air, and affords shade; and when a cloth is spread on the frames or cases, in the upper story, neatly tucked down (with a cushion below in winter), I have a perfect bee-home, and on a hot day the bees are far more comfortable.

The question of getting bees into the boxes is one of much importance. I have tried many ways, and will describe the one which I consider the best. I aim at early breeding, so as to have a good force about apple-bloom. I even up all colonies, so as to have a strong force from all; and it can be done in no way but by early feeding and proper care.

I add frames as needed till I have 9 Langstroth size. These I spread so as to fill the hive and let the bees build and fill out the combs just as much as possible; and as there are 9 instead of 10 frames, there is room for a lot of bees that are not really needed, but yet are just what I want at surplus time.

When honey comes in freely, and the frames are bulged and crowded, I shake off the bees and shave the honey off even with the frames, and place the ones with the least brood in the centre of the hive. I set first one ⅜ inch frame from the side of the hive, and the others only ½ inch from this, and so on to the ninth, which is within ⅜ of the ½ inch division-board. I now put on a case with the beveled edge over the first frame close to the side of the upper story. This case is one box narrower than the inside of the hive, which covers the 9 frames; but instead of a full case, I take out half the boxes and fill the space with cloth, etc., and set the case with the boxes at the back part of the hive, covered with enameled cloth and cushion.

I add twice as much water as honey to the honey shavings, and mash all together and strain through a cloth; this I set on the section case in a feeder, and apply the same covering.

Now, as the frames are closed up, and as the honey is above the sections, the bees are encouraged to take to them. I reduce the honey as it obliges the bees to provide a place for it. As soon as the honey is all taken down, remove the feeder, replace the packing, and when the boxes are fairly started, one row is set forward, and a row of boxes with foundation put in its place. I do not alternate one of started and one of raw foundation; for the started ones are almost sure to be bulged into the new ones; but with a whole row it is all the same.

We have room for one more set of boxes, which may, in time, be given; and as more bees are hatching, raise this case and set another with foundation, under; following up and removing as fast as they are finished. Some one may say, why use so few boxes. If he has measured a 28 one-pound case, he will see that to fill one requires 16 quarts Where is the colony to do this, which will rear a large number of workers and leave wax-workers and nurses in the hive?

Add the large crate to an open, airy hive, and we may easily account for poor box work. If they show signs of swarming, take a frame of brood and bees from a number of hives, and give them a laying queen; carry them away 2 miles, and in a short time there will be a good colony. Of course I replace with a frame of comb or foundation.

We must keep in mind that shade of some sort is indispensable; and evergreens are good and last some little time if only set in a can of water deep in the ground.

I believe much spring dwindling can be avoided by handling the bees at the proper time. While we are feeding in cold and chilly weather, the bees will get excited, and it is natural for a bee to load up and fly out, even if only a few feet from the hive, and return. However, if we manipulate, feed, etc., about dark, much of the excitement is avoided, both by the feed and handling. Clear honey is the worst thing to excite them. Bees suffer for water, and after much thought, I have invented a feeder, waterer and passage way over the frames, all in one. I changed a colony of Italians into a clean, dry hive, and they showed some uneasiness. I put on the feeder (which covers the length of the frames), and in one apartment I gave syrup, and the next close by I gave water with a bit of salt in it; and immediately they quieted down.

This arrangement is so made that the bees cannot get drowned or fly out; yet we can see them, and it does not shut off ventilation. It can and should remain on the hive all through cold weather, for a passage way if for nothing more. For shipping bees it has no equal; by opening it and packing the feed boxes with moss and inverting on the frames, the moss being wet, the bees have a perfect life preserver.

North Auburn, Maine.

For the American Bee Journal.

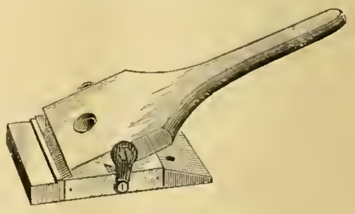
Improved Foundation Fastener.

W. H. SHIRLEY.

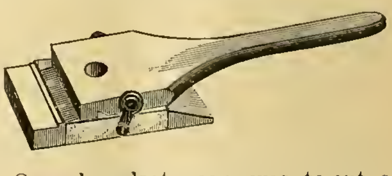
After experimenting with several methods of fastening foundation, I find that the Parker foundation fastener does the best work. On account of its sliding motion, I could rely upon doing a good job.

After using it a while, and putting the lubricants on the fastener with a knife, I decided that that was too dauby and slow; so I have improved it, as will be seen in the accompanying engravings, and have sent one to be placed in the BEE JOURNAL museum.

The improvement consists of a tin cup, made to put on the bottom piece of the fastener, which holds the lubricants. To use it when the top piece is back, lift up on it, and that forces the front end down into the cup, and you are ready to go ahead. To prevent the lubricants from running down the underside of the top-piece, cut a little notch in the underside of the top-piece, as seen in the engraving.



Any one who desires to improve the Parker fastener thus, can have any tinsmith make one at a cost of about 10 cents; and when put on and used, it will save time and daubing, and work like a charm.



Our plan, last year, was to cut a cup into the bottom piece of the fastener. This necessitates the use of a larger size fastener than the sections. This plan, I think, would pay any man who had 500 sections to fill with foundation. It was too costly for those who already had the Parker fastener; for all know it is very difficult to make people see a good thing when it affects the pocket-book.

Glenwood, Mich.

[The fastener is placed in the Museum for the inspection of visitors.—ED.]

Read at the N. E. Michigan Convention.

How to Begin Bee-Keeping.

R. L. TAYLOR.

[The following is the President's address, delivered at the Northeastern Michigan Convention at Lapeer, March 5, 1884, as mentioned on page 282.—Ed.]

1. The first and one of the most important questions which one proposing to enter upon the business of bee-ing is: Am I fitted for it by nature? Unless one has a genuine love for the business, and can keep alive some degree of enthusiasm, I doubt if he can attain real success. Though the fear of stings seems to the tyro a very formidable difficulty, it is really the least of all; a taste for apiculture will speedily overcome it. If one has, in addition to this quality, promptness, industry and practical energy in attention to details, with a determination to persistently labor to overcome difficulties, and never to yield to discouragements, he may well hope for fair success.

2. The first thing to be observed in deciding upon the territory to be occupied by an apiary, is that a country already stocked with bees must not be entered. To do so means a blasting of the hope of success at the outset. Then, the greatest care must be taken to occupy a place well supplied with all the honey plants necessary to make as complete a succession as possible, from early spring to the frosts of autumn; and especially should I insist upon an abundance of all those which are the source, generally, of the surplus crop, which are in this part of the State raspberry, white clover, basswood, and fall flowers.

3. The apiary should be placed upon a plat of ground which cannot by any possibility be flooded at any time of the year, and which has sufficient natural drainage to enable it to absorb quickly what little water remains upon it after a rain. It should, I think, be level, clean, smooth, and covered with a greensward kept closely mown, except where the hives are to stand, where some preparation to wholly prevent the growth of vegetation would be well, particularly about the entrance of the hive, which should also be so fixed that heavily laden and partially chilled bees that fall to the ground before reaching the entrance, can readily regain the hive without again taking wing. The hives are to be so disposed as not to hinder the work of the apiary, and so as to aid the bees in distinguishing, and so in finding their own honey. I prefer some shade, if it be not dense; for no shade at all is better than such as would create or retain dampness. A wind-break on the north and west is desirable, and should be early provided.

4. Before obtaining bees, determine satisfactorily to yourself the hive to be used, and that depends largely upon the size of the frame preferred. It is very desirable to use a frame exactly of the same size, as that mostly in use among those with whom you are likely to have dealings, either by way of buying, or of selling. Colonies upon frames, such as the purchaser desires to use, are worth more to him by a large percentage, than are those upon frames different in dimensions. Perhaps there is nothing about which the beginner is so likely to be careless as in this matter of looking to the size of frames in the hive he procures; and for the amount invested in it, there is nothing so important. The Langstroth frame so-called, which is 9⅛ inches by 17⅝ inches is, I believe, in more general use than any other, and I advise its selection always. It may not be better than any other, but all things considered, I think it is at least the equal of any. For one who for any reason wishes a shorter, deeper, and somewhat lighter frame, the American or the Gallup is the alternative. When once a frame is selected, adhere to it unflinchingly.

5. The hive itself should be a plain box without top or bottom. In depth ¾ inch greater than the depth of the frame selected. One of the other dimensions must be ¾ inch greater inside measure, than the length of the frame; and the remaining dimensions must be graduated to accommodate the number of frames desired, allowing about 1 7-16 inches for each frame. There must be a rabbet cut at the top of the ends, or of the sides, as the frame requires, upon which the arms of the frame are to rest; the rabbet must be just deep enough so that when the frame is put in position, the space above and the space below the frame are just equal. Some prefer tin rabbets; but I doubt whether their advantages balance the outlay. The cover should be a plain board simply cleated at the ends. The bottom-board is to be 4 inches longer than the hive, fastened to two pieces about 2 inches square; out of the upper side at the front end should be cut a triangular piece ⅜ inch thick. Two of the angles of the triangular piece are at the front corners of the bottom-board, and the third angle should be about 5 inches back of the middle of the front end of the board. With a circular saw this can easily be taken out. When this is taken out, the space left becomes the entrance to the hive, and this entrance may be enlarged or diminished, or entirely closed by simply moving the hive forward or backward. The hive on the outside, and the cover upon both sides, should, of course, be thoroughly painted with two coats of the best white paint. I should have said, that after the sides and ends of the hive are cut, each piece should have a hand-hole cut into it with a wabbled saw, for convenience in handling. For a second story, if it were desired to produce extracted honey, I should use a body precisely like that of the lower story, with a flat honey-board between the two; preferring the use of the honey-board to the disadvantage of having bodies of two styles. For comb honey use the Heddon case. A sufficient amount of foundation should be had for use in the building of all the comb, and that for brood-frames and extracting should be put upon wires.

6. It must be remembered that what I am saying is for those who have never handled bees; particularly when I say that the bees to be procured should be the Italian, on account of their peaceable character; for this quality will enable the beginner the sooner to divest himself of all fear when handling bees; and the number of colonies should be no more than 2 or 3. A good work on apiculture, and one or more of the bee-periodicals, which should have been already obtained and well studied, should now be kept in constant requisition. These colonies, and largely the time of the learner, should now be given to investigation, practice and experiment. The incense of the smoker, which should of course be provided, should seldom fail to arise on the incoming of every warm day.

The object the first year should be to obtain practice, and a good degree of familiarity with bees, and with the various manipulations employed in their management. How to rear queens? How to divide colonies? How to hive swarms? Can a colony that has begun to prepare for swarming be induced to yield that disposition successfully? are only a few of the many points that should be studied and experimented upon remorselessly.

Let the beginner sacrifice his colonies, if need be, in order to become thoroughly grounded by practical experience, in as many as possible of the underlying principles of successful apiculture. I could not have gone into details and thus filled out the outline I have drawn, without trespassing on your time; nor can I take your time to touch on other matters of interest and consequence, but will leave the subject here, believing that the above suggestions followed out with a thoroughness which is begotten of genuine interest, will fit the beginner to care for an apiary of a moderate number of colonies, with satisfaction and success.

Lapeer, Mich.

For the American Bee Journal.

Students in Apiculture.

DORA HYDE.

If bee-keeping is a science and to be learned by an apprenticeship, it seems to me there ought to be some uniform system agreed upon by the teachers for the students. Now, there are as many "terms to students," as there are bee-keepers who teach, or propose to teach bee-keeping.

We understand an apicultural school somewhat on the plan of the "Business Colleges," was discussed by some of our leading bee-men last summer; but no terms could be agreed upon. The exact nature of the school I did not learn, but I have been informed that it was to have had a teacher or "professor," who would give instructions in the theory in general, and another, a practical honey-producer, who would furnish a few colonies, hives, sample fixtures, etc., and give a short practical illus tration of his method each day during a term of five months.

The school was given up, because one of its projectors now receives students and teaches them practically in his shop and apiary, and in a manner which he considers far superior to any school where theory alone is taught.

I was lately talking with a gentleman who had spent several weeks with each of four different parties, who take annually from 4 to 20 students; and his opinion was that some of those who propose to teach the business, seek in this way to get cheap labor only, and give as little attention as possible to the instruction of the students; giving some of the students work in the apiary, and others work in the shop, or, perhaps, even in the office at matter entirely disconnected with apiculture.

As a matter of business, this may be a good method; but the other side has rights which, in common justice, we should consider. The moment we accept the application of a student, and he places himself under our instruction, it is our duty to him, to our profession, and to ourselves, that he is directed each day where to look for instruction. If he is not already familiar with the operations of the apiary, and has not learned just what he needs to know, and where and when to find it, he will be just as liable to spend the most important part of the season in the shop, "driving sections," as out in the apiary, learning to handle swarms. The fact that he has placed himself under instruction is evidence of his ignorance of the business, and our accepting him as a student binds us as an honest teacher to instruct him in all the branches of the business, to the best of our ability. The selection of those who already know the most about the business to do the work in the apiary, and sending others who have some mechanical skill, to the shop, is an injustice to both classes.

We believe that young men who can spare the time, and who wish to engage in apiculture as a vocation, cannot do better than to spend a season with an experienced apiarist. We would advise them, however, to be sure they find one who will instruct them in all the details of the business, at a fair price for such instruction, rather than to give their time and labor for the crumbs that may accidentally fall in their way.

Cleveland, Ohio.

Read at the N. E. Michigan Convention.

Cane Sugar for Winter Stores.

W. Z. HUTCHINSON.

In so many instances have bees died under circumstances in which the cause of their death could scarcely be attributed to anything except the improper quality of their food; diarrhœa has occurred under so many apparently conflicting conditions, and these apparent contradictions could only be explained upon the hypothesis that the food was of an unsuitable character; and in so many instances has the superiority of sugar stores been demonstrated, that, three years ago I began to experiment by extracting the honey, in the fall, from the combs of a few colonies, and feeding the bees a syrup made from granulated sugar. Some of the sugar-fed colonies were left out-of-doors, some placed in the cellar, and others buried in a "clamp."

The first winter all came through alike. The honey of that season and locality was exactly as good for winter stores as was sugar. The same experiments were repeated the next season with marked results in favor of the sugar. The only colonies wintered in the open-air that lived until spring, were those having sugar stores. All of the colonies in the cellar, not having sugar for food, suffered from dysentery, and ⅔ of them died; while those having sugar stores showed no symptoms of dysentery, and were dry, sweet, and clean, even the bottom-boards not being covered with dead bees. The bees in the "clamp" had wintered much the best; 15 per cent. of those with natural stores had died from diarrhœa, and most of the remainder, except those with sugar stores, had suffered more or less by the same disease.

Last fall I removed all the honey from about 20 colonies, and fed them sugar. About 50 colonies were each fed from 5 to 15 pounds of sugar. I theorized as follows: The bees will store the sugar in the empty cells in the centre of the hive, where they will be most likely to cluster in the winter; while the honey that is in the upper part and corners of the combs will not be consumed until spring, when frequent flights will prevent diarrhœa. About 15 colonies were left with natural stores.

If the 57 colonies in the clamp are in the same condition as the 13 in the cellar, they are in fair order. Fifteen colonies were left out-of-doors; 10 of them packed with chaff and sawdust in large boxes, while 5 were left with but slight protection.

I have about decided that bees require protection of some kind. I have, for several winters, left a few colonies unprotected; but in only one winter, and that was a warm one, have they wintered so well as those that were protected.

So far this winter I have lost 2 colonies, and they were from among the 5 that were unprotected. Each had been fed about 12 pounds of sugar, and the remainder of their stores, about 8 pounds each, was honey. One of them starved to death. It was not a very strong colony, and the continued, exceedingly cold weather prevented the bees from moving along in quest of food. There was not the slightest sign of diarrhœa; but the other colony died of it, and for awhile I was puzzled; but, at length, I remembered that this was the only colony in which the bees had clustered upon the upper part of the combs, and, consequently, they had fed upon natural stores.

Rogersville, Mich.

Read at the N. E. Michigan Convention.

Production of Comb Honey.

L. C. WHITING.

The first point aimed at is to have the colonies strong in numbers and in the right condition to spare the field-bees to do their work. I have seen no plan that suits me better than the one recommended by Mr. Doolittle, which can be found in the bee papers of last year.

Have your racks and sections ready to be put on as soon as the flow of honey commences. Have, if possible, a few sections in each rack that are partly built out. These can be obtained by placing frames of sections filled with foundation in the brood-nest of strong colonies when fruit trees are in bloom, removing them as soon as they are well drawn out.

Place them in your honey racks to be ready for the main crop. Put the sections over the brood-nest as soon as you see a streak of white, new wax being added to the top of the brood frames between the combs. Then open the hive and reduce the size of the brood-chambers with a division-board to the capacity of the colony, or enough to crowd the bees into the sections. If it is a small or weak colony, put a frame of sections in the brood-chamber behind the main part of the brood, and keep one frame of open brood behind the frame of sections, changing this frame to the centre of the brood-nest as soon as capped over; never allowing the bees to hatch out behind the sections, but keep this space filled with eggs or open brood.

Should the bees swarm from a strong colony, place the swarm on the old stand, and give the rack of sections from the old hive. The swarm should have at first as few frames as they will cluster upon, so as to force a large portion of the bees into the sections, giving new frames as fast as those in the hive are filled with eggs.

Give the parent colony a frame or two of sections to draw out in the brood-nest, and when the queen is hatched, give them brood or bees enough to make a good colony, or double up with other colonies. Always keep the brood-nest crowded with bees, and you can have the honey stored when you want it.

Every colony can be made to gather its share of comb whether it is a nucleus with one comb, or a large one with 8 or 10 frames.

The wide frame I use has no top-bar, which enables me to take out the partly filled sections and replace with empty ones with little labor.

All sections should be finished over the brood-chamber and removed as soon as well sealed. If a colony is strong enough to work in the sections and does not, transfer a few sections, bees and all, from other colonies, and uncap some of the honey in the centre of the brood-nest. Full combs of honey can have the caps broken and placed in the centre of the brood-nest one at a time, and if conditions are favorable, it will be mostly taken up into the sections. Reversible combs should be turned over whenever there is too much honey between the brood and the sections, and especially a few days before the close of a honey flow.

Always keep the brood-nest within the capacity of the queen. Handle the frames often, as it induces the bees to feed the queen, and she will lay the more. All caps and racks should be made strong, and so arranged that separators can be used or not, at the pleasure of the operator. The most profitable time to put in separators is after the bees are well at work in the sections and before the combs are built out too far. Look over the sections often in the early part of the season, and put in place any combs that are not straight, or as you wish them. It will save much disappointment when you harvest the crop. Use comb foundation for starters in all cases, and have at least half-inch openings between the sections. No more room should be given in the sections than the bees can keep warm, or they will waste much wax.

East Saginaw, Mich.

Read at the N. E. Michigan Convention.

The Best Strain of Bees.

M. D. YORK.

The Italian bee is greatly magnified by many; even people who know nothing about the honey bee, have come to think that if one is keeping Italians, he is sure of success.

After studying their character closely for the past five years, I find that the queens are very prolific, more so than the blacks, and produce a larger amount of bees. This trait is all right for some purposes. I once thought a large amount of bees in a hive, and a prolific young Italian queen meant lots of honey; but I have found this to be a mistake. I generally get the best results in comb honey from those which are less prolific; and, consequently, less inclined to swarm.

I said this trait of prolificness is all right for some purposes. It answers well if one is working the business of rearing bees to sell; and also for the one who is just commencing in the business; and calculates his success by the number of swarms he can get from one colony. This is all right, if he could only stop when he wishes to, or rather when he has all the bees he wants, and desires to work for honey; but he is very much disappointed to find that they keep right on swarming, regardless of his wishes, and he has to let them spend their swarming energy in building brood-combs instead of storing surplus honey.

Again, it is all right if we wish to work for extracted honey, for the extractor is, without doubt, the best non-swarming apparatus ever invented; but I cannot yet believe that extracted honey ever will take the lead in our markets.

I can work the blacks with ¼ more bees in the hive, for comb honey, than I can the Italians or hybrids, with far less danger of their swarming. This swarming mania can be controlled to a certain extent, we all know; but I would rather have one colony to work for comb honey that swarms naturally the forepart of June, and then is satisfied, than two that you have to keep taking brood from, or swarm them artificially.

I was very much pleased to see how emphatically Mr. Hutchinson came out in his article in *Gleanings*, in favor of natural swarming; but I was very much surprised when he also came out in favor of the hybrids. Although Mr. H. is one of our most successful queen breeders, it is his first year's work for comb honey; and now Mr. H. should next season try some pure blacks for comb honey, and report.

Now, to sum up the whole matter, if it is desired to produce comb honey, the common black or brown bee is the best, in my opinion. It is the general verdict of those who have produced both comb and extracted honey, that the comb honey finds the most ready sale. I claim that the producer of comb honey from Italians, or their crosses, cannot compete in the same market, at the same time, with the one whose honey is produced by blacks. The honey of the former is not so nicely sealed, which gives it a darker and rougher appearance. I have never been able, as a rule, to get them to fill out their combs so nice and smooth next to the wood as do the blacks.

It is my opinion that the black bee will be much sought after in the near future; and I think there is nothing gained in crossing them with the Italians, unless making them more cross and vicious to handle is an advantage.

Millington, Mich.

For the American Bee Journal.

Wabash County, Ind., Convention.

The bee-keepers of Wabash County met at the Court House in Wabash, Ind., on April 11, for the purpose of organizing a bee-keepers' association.

Mr. A. Singer was chosen chairman, and Mr. H. Cripe, Secretary *pro tem*, of the meeting. The chairman then explained the object for which they had met; after which a committee was appointed to prepare a constitution and by-laws. Adjourned till 1 p. m.

At 1 p. m. the chairman called the meeting to order, and the committee on constitution and by-laws reported, which report was unanimously adopted, after changing the membership fee from 50 cents to 25 cents. Eleven names were then enrolled.

The election of officers was next in order, and resulted as follows: Mr. Aaron Singer, President; Mr. J. C. Zimmerman, Vice-President; Mr. H. Cripe, Secretary, and Mr. G. D. Lowman, Treasurer.

Two hundred fifty-six colonies of bees were represented by the members. After some discussion the convention adjourned to meet at the same place Oct. 5, 1884.

H. CRIPE, *Sec.*
AARON SINGER, *Pres.*

For the American Bee Journal.

Improved Bees—Comb Foundation.

JAMES HEDDON.

In reply to Mr. Doolittle's question on page 260, top of third column, let me say that I have several times in this JOURNAL, stated my objections to such complications as he, in that article, describes; and why I consider the shallow-chamber indispensable. I now refer him to page 637, for 1883, to quotations from Mr. Langstroth.

Mr. D.'s attack upon the efforts to improve bee stock is very well answered by two articles on pages 278 and 280. I wish to present just one among many refutations to his article against that greatest boon to scientific apiculture—comb foundation. Formerly, from 8 to 12 days of the best of the honey harvest was granted to a colony to get the brood-chamber ready for surplus boxes. Now, we give them just 48 hours to accomplish the same, and they do it in very much better shape. About 2 to 3 tons of fine wire are now used annually; and actual experiment has led to this wholesale use. Please let me be remembered as one who plead for the shallow-chamber between the brood and surplus apartments, and full sheets of comb foundation above and below, with wax and honey at present prices.

Owing to the backward spring, I think it better to postpone my report on wintering until about May 15. My bees are not yet out of the winter packing; they are in excellent condition as a whole. My past winter's loss is small for this county.

Dowagiac, Mich.

For the American Bee Journal.

Western Michigan Association.

According to appointment, the bee-keepers of western Michigan met at Berlin, on April 24. In the absence of the President, Vice-President Thos. M. Cobb, called the meeting to order.

The minutes of the previous meeting, and the Treasurer's report being called for, were read and adopted. The election of officers then took place, resulting as follows: For President, Thos. M. Cobb, of Grand Rapids; for Secretary and Treasurer, Geo. E. Hilton, of Fremont Centre; for Vice-Presidents, Ottawa Co., Jno. Slabbekoorn; Kent Co., Lewis Woodman; Muskegon Co., G. C. Young.

It was decided to annex the counties of Oceana and Newaygo; their Vice-Presidents to be appointed by the Secretary. By request of the Secretary, it was also decided to hold the annual meeting at Fremont, on the last Tuesday in November next.

Topics relating to bee-culture were then discussed by all the members. Colonies represented were, fall 480, spring, 441. Only 58 colonies being wintered in cellars. Although the meeting was small, much interest was manifested by all. Adjourned.

F. S COVEY, *Sec.*
THOS. M. COBB, *Pres.*

Local Convention Directory.

1884. *Time and place of Meeting.*

May 13.—Cortland Union, at Cortland, N. Y.
M. E. Darby, Sec.

May 15.—Tuscarawas Co. O., at Port Washington, O.
A. A. Fradenburg.

May 16.—N. E. Kansas, at Hiawatha, Kans.
L. C. Clark, Sec.

May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Essentials in Queens.

On page 234, Mr. Heddon, in reply to "Tommy Dodd," says: "Not one-half of the queen-cells usually built, would please me from which to rear a first-class queen."

1. What does Mr. H. call a first-class queen-cell?

2. What standard point does he require in a virgin queen to prove satisfactory?

3. After being fertilized, will she always prove a regular layer, or deposit her eggs in proper order?

Joseph M. Wismer.
Jordan Station, Ont.

Answers.—1. There is no way to decide regarding cells, that I can readily describe here.

2. Virgin queens are too young to test for qualities.

3. Not always; but she will, as a rule, if nothing unnatural happens to her.

Italianizing, etc.

1. I have one colony of bees on a box-hive that is very strong; turn the hive up when I will, warm or cold, every inch of space in the hive seems to be crowded with bees. The combs are full of brood to the very bottom. There are no queen-cells that I can see, but there are lots of drones hatched and flying. Will they throw off a swarm soon, or what is the best to do with them? I have set the hive on top of a Langstroth hive, next to the frames full of comb and honey.

2. How can I tell worker combs from store combs?

3. How is the surest and best way to tell when robbing is commencing?

4. What time of the season is the best to introduce young (not virgin) queens to Italianize black bees?

I had a lively time with robbing one day. I carried some into the cellar; covered others with blankets; and closed the entrance to all the weakest colonies. I did not get control of them until I closed up my strong colony. Then they stopped in a few minutes.
Dave H. Lisle.
Chebanse, Ill.

Answers.—1. You must either give them surplus room above, artificially swarm them, or wait for natural swarms.

2. Worker comb has about 5 cells to the inch; store or drone comb about 4.

3. By the actions of the bees trying to enter the hive, robbers appear in a suspicious manner flying to-and-fro, alighting cautiously, and often arising instantly, re-alighting, repeating this several times before entering the hive. If the robbed colony is protecting itself, you will see the bees clinched and fighting.

4. June and July usually.

Bees and Peaches.

I live just across the road from a peach orchard of about 20 acres, and there are many others near.

1. Would it be wise or otherwise to attempt bee-keeping as a specialty in my location?

2. Would the sour juice from rotten and broken peaches injure the honey, or cause the death of colonies in wintering?

3. We do not know whether the bees would gather the juice or not; but if they should, would it injure the surplus honey? James Smith.
Willoughby, Ohio.

Answers.—1. The peach orchard will be no objection.

2. I had my whole apiary once store large quantities of cider in each hive. They wintered tip-top all the same.

3. I think you need have no fears of any juice injuring the surplus honey.

Pollen in Abundance.

We are having a perfect avalanche of pollen; almost half filling some of the hives, and still it is coming in rapidly from soft maples, and dandelions to come yet. 1. Will not so much pollen prove to be a nuisance filling the combs so that brood cannot be reared? Bees are breeding finely now, and have wintered well. 2. Can the Langstroth hive be used without honey-board, and not have the queen bother by getting into the sections?
Hillsdale, Mich. W. B. Dresser.

Answers.—1. You need have no fears regarding clogging the combs with pollen at this time of the year.

2. Yes.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884.
Jonathan Stewart, *Sec.*

☞ There will be a meeting of the Northeastern Kansas Bee-Keepers' Association, at Hiawatha, Brown Co., on May 16, 1884. A general attendance of bee-keepers is expected.
Granada, Kan. L. C. Clark, *Sec.*

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. Allen, *Sec.*

☞ The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers' association. All are earnestly invited to attend.
A. A. Fradenburg.

☞ The Cortland Union Bee-Keepers' Association, will hold their spring meeting May 13, 1884, at Cortland, N. Y. M. G. Darby, *Sec.*

Honey and Beeswax Market.

Office of The American Bee Journal, }
Monday, 10 a. m., May 5, 1884. }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

Chas. F. Muth.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 14@16c. Dark and second quality, 13@14c; extracted white clover in kegs and barrels, 8@9c.

BEESWAX—Prime yellow, 34@35c.

Thurber, Whyland & Co.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirous of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, 7@9c.

BEESWAX—30@37c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Only in a small jobbing way is there anything doing. Market is easy at the quotations, holders being anxious to close out stocks. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—Demand good for this time of the year. Prices unchanged. Choice comb, 2 lb. sections, 15@16c; 1 lb. sections, none in market; dark and irregular, 10@12½c. Extracted, in better demand for dark honey at 7@8c; white dull at 8@9c. I could sell a few thousand pounds of dark honey very readily at above figures. Stocks are low.

BEESWAX—None in this market.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Market continues very fair, particularly for choice 1 lb. sections, which are in good demand at 18c; 2 lbs. do not sell so readily, but in the absence of 1 lbs. it moves at 17c. Second quality is very slow at 14@15c, and extracted not wanted at all in any shape.

BEESWAX—Very scarce; would bring 35 cts. on arrival for choice yellow.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 17@18c; extracted, 7½@8½c.

Geo. W. Mead & Co., 213 Market St.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

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☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

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To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

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Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

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A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

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Cheaper than any other make.

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Syrian Queens bred from Queens imported from Mount Lebanon. Italians bred from best imported and selected home-bred. Tested Queens of either race before June, $3.00 each; in June, $2.50; after June, $2.00. Untested before June, single Queen, $1.25; 6 or more, $1.00 each; after June, single Queen, $1.00; 6 for $5.50; 12 for $10.00, or "Cook's Manual of the Apiary," cloth only 90 cents with order for Queens.

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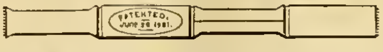

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49BCtf Watertown, Wis., Dec. 1, 1883.

1884.

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☞ State where you saw this. 8A2t 10Ctf

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Square Glass Honey Jars, Tin Buckets,
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PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

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18A13t 6B3t

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is operated upon a new principle by which the sections are placed in vertical lines with the brood frames; continuous passages being effected in a

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Italian Bees and Queens For Sale.

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" tested in " 2.50; " .. 2.00
Nuclei, 1 frame (large) June or July.... 1.00
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Price of Queen to be added to prices of Nuclei. Will give special rates to parties who want two or three Nuclei with tested or untested Queens. Address,

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IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY.** Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

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11Atf

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NEW AND USEFUL

Articles for the Apiary

Send for our 16-page illustrated Circular.
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1868. 1884.

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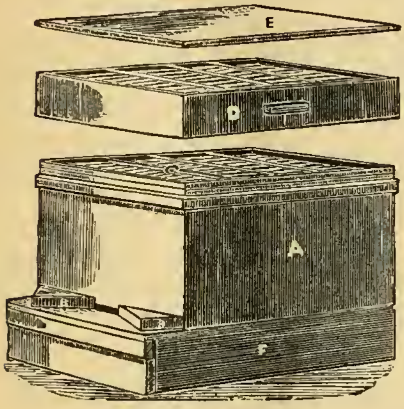
COLUMN.



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I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

COMB FOUNDATION.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. My Circular gives prices.

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I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

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Will receive terms for 1884 on application.

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If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

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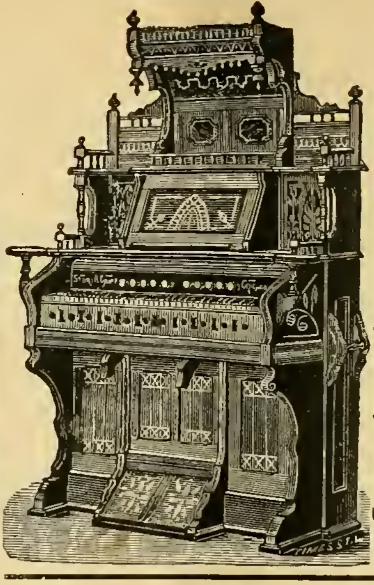

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G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
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Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

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18A5t

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed Sections, Smokers, etc. Send for Price List.

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AT BED ROCK PRICES.

COLONIES—8 Langstroth Frames, in light shipping box	$ 4.50
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After June 1st, 25 per cent. off.

After June 1, tested, per dozen	12.00
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Pure Italian Bees and Queens

For further information, send for Circular.
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Full Colonies. Nuclei and Italian Queens. Send for Price List before buying elsewhere.
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18A5t 5B1t

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THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., May 14, 1884. VOL. XX.—No. 20.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS C. NEWMAN,

EDITOR AND PROPRIETOR.

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Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

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THOMAS G. NEWMAN,

925 West Madison Street, **Chicago, Ill.**

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☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

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We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
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The 8 above-named papers	9 00	7 75

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My bees are in fine condition this spring. I have lost but 4 out of 182 colonies. The outlook is fine for a good season. L. J. DIEHL.

Butler, Ind., May 7, 1884.

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A. REUSCH, *Sec.*

☞ Letters for publication must be written on a separate piece of paper from items of business.

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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E. F. SMITH, Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

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and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

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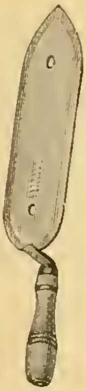

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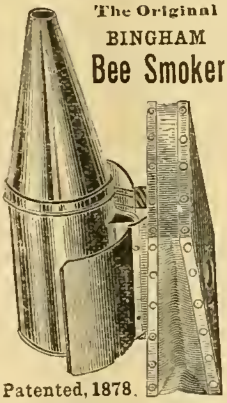
BINGHAM
Bee Smoker



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With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

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Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,
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On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates, on larger quantities, given upon application.

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Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means can afford to do without. Cloth, **$1.25;**

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Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellung über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

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THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

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THE AMERICAN
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THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

The Honey Crop of California.

We have received the following explanatory letter from Messrs. Geo. W. Meade & Co., of San Francisco, Cal., dated April 29, 1884. They say:

In the BEE JOURNAL of April 23, we notice that Messrs. Stearns & Smith, of this city, dispute the figures we gave in our annual review, as a close approximation of the California honey crop of last year, in which we set forth the total production at 960,000 lbs. The firm above referred to, place the quantity at 1,387,000 lbs.; in other words, an excess over our figures of 427,540 lbs.

Our figures were compiled, as they always are, from the only reliable sources in all the honey sections of the State; and, in making figures, we deal with *weights* only, and not cases, as both the cases used for comb and extracted honey now differ in size and quantity of honey contained therein.

Let us analyze the figures as given by Messrs. S. & S. They state the receipts at 8,456 cases extracted honey, which, it seems, they figure at 120 lbs. net weight each. Allowing that the number of cases is correct, although it is not known where they obtained their information, it is a fact well known to large honey dealers here that fully *one-half*, if not more, of this honey was packed and received this year in cases of *one-tin* each, which hold only about 70 to 75 lbs. net of honey. Deduct, therefore, 50 lbs. each on, say 4,500 cases of honey, and we have a deficiency on the start on extracted honey alone of 225,000 lbs. from their figures.

The same authority also places the production of comb honey at 4,228 cases, which they figure at 60 lbs. net each, or 253,480 lbs., an equivalent of 12 to 13 cars of comb honey; when from the most reliable sources in the whole State, our own purchases, as the largest dealers, and inquiries with commission dealers, we cannot learn that the entire product of comb honey the past year exceeded from 125 to 150,000 lbs. all told; and these figures we believe to be correct enough for all practical purposes.

Deducting, therefore, 125,000 lbs. of comb honey from their figures, we have a further deficiency in their comb honey estimates of 128,480 lbs.

Taking up their figures on "shipped from interior," all of which were included in our original estimates, and working on the same basis, fully one-half in *one-tin* cases, we can easily make a deduction of 50,000 lbs. from their estimate of 118,340 lbs., thus reducing the quantity to 68,340 lbs.

In conclusion, therefore, we beg to recapitulate as follows:

Estimate made by S. & S.		1.387,540
Less deficiency extr.	225,000	
" " comb.	128,480	
" " Int. ship.	50,000	403,480
Net production		984,060
Our figures		960,000
Difference		24,060

While these figures, as given by us, are not claimed to be *absolutely*, yet we know them to be *approximately* correct; and we again asssert, without any fear of successful contradiction, that the total honey crop of California for the past year, according to our original figures, was somewhere between 950,000 and 1.000,000 lbs.

An Apostle in days of old said: "Without controversy, great is the mystery of godliness." After reading the foregoing, we may remark: Without controversy, great is the honey crop of California!! While, perhaps, neither the figures of Messrs. Meade & Co. or Stearns & Smith, are *absolutely* correct—they show most plainly that the honey crop of last year was quite satisfactory, taken as a whole, and has been shipped to all quarters of the globe.

We are glad to get these figures from the two rival honey merchants of San Francisco, for they show conclusively that there is no collusion, and the figures are near enough for all practical purposes, no matter which are the nearest to the exact amount.

While we thank both firms for their interesting figures, we think there is no need of further dispute concerning the small discrepancy between the two estimates. We only wish we had two such firms in every large city of the East; for competition is the life of trade—especially the honey trade. What is needed more than anything else, is men who will push the sale of honey and thus create a market for the product.

☞ Prof. Cook writes us that he has sold 2,000 copies of his Manual during the past year. The twelfth thousand being just published. The Manual is a deservedly-popular book, and we congratulate the Professor upon his success with it.

☞ We have received a pamphlet of 44 pages, by Mons. Ed. Bertrand, of Nyon, Switzerland, entitled "The Care of Colonies of Bees; or a calendar of apiculture, with advice for beginners, in the management of bees." It consists of a detailed system of management of bees for each of the months of the year, and covers the entire ground of manipulation. It is published in French; and is scientific, progressive and practical.

☞ Mr. I. V. McCagg, President of the Eastern Iowa and Western Illinois Bee-Keepers' Association, has sent out postal card blanks to each member, and desires that they all be filled out and returned to him, so as to enable him to make a complete report to all the members, before the swarming season commences.

☞ Mr. F. A. Chapman wishes to correct the statement concerning the 800 pounds of honey on page 215. He exhibited it at the Industrial Exhibition held in Cobourg last October, instead of at the Industrial Exhibition in Toronto last September, as there stated.

☞ Mr. Ira Barber desires to correct his article concerning ventilation, in the middle of the third column of page 264. He meant that those *not* ventilated at the top of the hive were in just as good condition as when put into the cellar, and that all upward ventilation was abandoned.

CORRESPONDENCE

For the American Bee Journal.

Controlling a Field.

G. M. DOOLITTLE.

I read with much interest the article found on page 86, by James Heddon, upon the subject of "Locating and Occupying a Field;" and I agree with his views, providing the occupant is a person who is about to change his location in search of a better or different field. In this case, a man who would locate near another apiary to the disadvantage of both himself and the owner thereof, must be so bereft of reason and the spirit that would "do unto others as ye would that they should do unto you," that any course of getting rid of the intruding party would be justifiable. But there is another side to this question, which I wish to speak of, to which Mr. H. does not allude, purposely or otherwise.

It so happens the oftener that the person who will injure the occupant of a field the most, is one who is already an owner of a large property near you, who, from poor health, jealousy, or your reported success in bee-keeping, desires to try his hand at the business. This person, perhaps, is a farmer, a merchant, or a lawyer, who does not want to leave his present location to start an apiary, neither could he well do so if he chose. He starts out with the desire to keep but a few colonies for his amusement, and a little honey for his family, thinking that this will not harm you in the least. After starting, he has a good year as well as you, and he becomes enamored with the pursuit. He falls to reasoning, and says: "I own a large farm, producing plenty of plants and trees which produce honey. Is not this mine by priority, and is there any reason that I should not keep all the bees I wish on account of Mr. —— wishing his bees to monopolize my fields? No, sir; I will keep all the bees I wish, and if Mr. —— thinks he will crowd me from the field by putting in more bees than I have, I will show him that I can put in 10 colonies to his one." Thus our bee-keeper, by using Mr. Heddon's advice on this man, has "cut off his own nose to spite his face."

What I want to get at is the right of the thing, and for this reason I am going to give a little personal history.

I was born and brought up within 50 rods of where I now live. Father kept bees when I was a small boy, getting as high as 60 colonies in box hives. These all died when I was about 10 years old, of that dreaded disease, foul brood. When I became of age there were about 250 colonies within two miles of us, kept by 3 or 4 persons. From reading King's Bee-Keepers' Text Book, a desire sprang up for bees. Father and I talked the matter over, and the result was we purchased 4 colonies when I was 22 years old. That fall he gave me his, and I started out alone in the bee business.

I am often amused now, as I look back, at the ideas I then entertained. My highest aim was 20 colonies, and I hoped to secure an average yield from them of 20 lbs. each, or 400 lbs. total; this, at 20 cents per pound, would give $80. Eighty dollars would give me quite a lift, and I could care for the bees and the farm at the same time, without extra help.

After I had increased to about 30 colonies (did not stop at the 20, you see), the man living about one mile from me, and having the largest number of bees of any one (120 colonies), came to me and talked quite similarly to what Mr. H. advocates, saying I was injuring his business, and as he had a large apiary before I began to keep bees, I ought to quit the business and leave the whole field to him.

I told him that father had kept bees long before he ever thought of keeping them, and that I expected to keep at the business as long as it was profitable, as we had a farm, and I did not see why my bees did not have as good a right to visit the clover and basswood on that farm as any body else's bees. The result was that he felt that I was wrong, and I felt justifiable in the course I pursued.

I wish here to ask Mr. Heddon if he does not think I had a right to keep bees under the circumstances? Well, right or wrong, with the 250 colonies against our 4 to start with, I have lived to see the time when not one of the parties who then kept bees have a bee at the present time. This shows that some man smarter than I may yet start in bee-keeping in my field, and cause me to move out or quit bee-keeping; so Mr. Heddon's "neighbor Jones" may yet cause "Mr. K." to relinquish his field in spite of Mr. Kendall's priority and additional numbers.

But to return to my story. When I had increased to about 100 colonies, a colony of bees was given by a friend to a neighboring farmer, whose land joined with my father's. As we were good friends, he often came to see me and talk bees, which I was always free to do.

He came out the next spring with one weak colony, which did not seem to build up any. He desired me to go and see it one day, which I did. I told him to come over on a certain day and I would show him how to fix his colony. He came, and I gave him a frame of brood just biting the covers to the cells, and told him to take it home and place it in the centre of his little cluster of bees. He did so, and from this he now has nearly 40 colonies. He often says if it had not been for Doolittle, he would never have had a bee, while I realize (knowing the man) that had I not done this, or rather had I shown the spirit toward him, "Kendall" did toward "Jones," in Mr. Heddon's articles, he would have been the worst rival in bee-keeping I could possibly have. As it is, he is contented to double back his bees to 20 colonies each spring, and keeps them for pleasure, and profit also; for he secures nearly or quite as good results from his bees as I do from mine.

Two other neighbors starting in bee-keeping (one living a mile away, and the other 2½ miles), I have treated as friends, telling them how I worked bees, and showing them freely all I know of the business, till to-day one has 45 colonies and the other 80, each expecting to make a specialty of bee-keeping. In this I have only done as I would be done by, were I starting again, whether Mr. H. thinks it right or wrong.

Now, as I said at the outset, I believe Mr. H. to be right (as long as there are plenty of unoccupied fields) in his advice regarding bee-men who are changing their location; but I cannot think the same course applied to friendly neighbors is a correct one. I believe in letting live as well as living; and if my neighbor desires to start in bee-keeping, there is no law, moral or legal, to hinder him from so doing. After he has once determined to start. I believe he will cause me less trouble if I treat him in a neighborly way, then he would were I to try to show him that I thought he had no business keeping bees.

But perhaps Mr. Heddon thinks as did my good friend Elwood, who once told me that he thought I was doing the bee-fraternity much harm by writing so much information to the bee-papers, and reporting my yields of honey; for, said he, "by so doing you are enticing thousands into our ranks, through your articles, only to be a curse to us by causing lower prices for our honey from an over-production of the same."

Perhaps I am wrong, and mistook my calling when I left farming to enter bee-keeping. Be this as it may, I have never written with but one object in view; namely, that of benefitting others by my experience, as I have been benefitted by the experience and writings of such men as Gallup, Quinby, Langstroth and hosts of others. I have only told of bee-keeping as I found it to be, without fear or favor.

Borodino, N. Y.

For the American Bee Journal.

Assorting and Grading the Honey.

JOHN G. SMITH.

How to grade the honey, has for a long time perplexed my mind, and is still unsolved. No doubt there are very many others who are questioning the feasibility or practicability of the apiarist to grade or classify the particular kinds of honey, save two grades; viz., spring honey and fall honey.

In my opinion the true source from which the honey is gathered by the bees at any particular time, cannot be ascertained, from the fact that we have so very many different flowers in bloom at the same time.

I have kept bees on the improved plan for 5 years, and my observations have been that bees of the same colony do gather honey from various kinds of flowers all at the same time; and that each bee gathers a particular kind of honey. For instance, if a bee starts out in the morning and works on a particular flower, it will invariably gather from that same source all the day, and perhaps for several succeeding days, while another bee will visit some other flower in like manner.

At this time we have, in this locality, many thousands of different flowers in bloom, with our bees gathering from every source. It is simply spring honey. My neighbors say that I have my bees so well trained that I can handle them as though they were flies; but I have yet to see the colony of bees so well trained that they will all gather one kind of honey at the same time.

New Canton, Ill.

For the American Bee Journal.

A Bee-Keepers' Union Wanted.

R. J. KENDALL.

Every article in any number of the BEE JOURNAL, dealing with the question of marketing honey, I always read with interest—and I read too few. I entirely agree with Mr. H. O. Edwards, that this subject does not seem to receive enough attention. To me it seems that the cause of the present low rates for honey is very much the fault of bee-keepers themselves.

Mr. Geo. W. House, "from time immemorial" almost, has been preaching up co-operation; but no one appears to pay much attention to him, if we may take actions as evidence of attention. Yet in co-operation, undoubtedly, lies the real secret of success. We want co-operation in communities, in counties, in States, and throughout the whole country. About a year ago I showed how, by co-operation, any section could educate the honey consumers of that section to take either extracted or comb honey; but my article fell as flat as ditch water, on the community; no one apparently took any notice of it, and we are still going on in the same old rut.

I believe that by combination and study, bee-keepers could net $1,000 per year as an average income; and this amount is by no means high. If a man runs an average of 100 colonies, he ought to get an average of 100 pounds per colony, and this would give 10,000 pounds of honey, which, at 10 cents per pound, would give $1,000. Is 10 cents per pound too much? Is 100 pounds per colony too much? Surely not. Yet we see extracted honey quoted at 6½, 7, and 7½ cents per pound. Honey sold at retail at 15 cents per pound is cheap; and a 5 cent margin should pay all expenses from producer to retailer; and I believe by right management it could be done.

This method of shipping honey indiscriminately to commission merchants is bad, and tends directly to lower prices, as any one who has lived in a large city will testify; *i. e.*, if he has had experience with commission merchants. The better way would be to either select some one man to handle all the honey, or else establish our own agency on the co-operation plan. To such a central depot, honey could be shipped in bulk, and be there bottled, labeled, etc., and sold to retailers at not less than a certain price; or it could be sent already bottled, labeled or canned ready to retail. But I hear some one say, "if such a course were adopted, some firm would start up to cut prices." Not postively. For in the first place, with unity amongst honey-producers, such a firm would be unable to get honey at less than 10 cents per pound; or if it did, it would get inferior honey from persons who produced it incidentally, and were simply bent on getting something for an article upon which they had bestowed little or no care. The consequence in the end would be increased repute for the honey produced by the union men, and their brand would become the staple brand.

Now, to prove that my idea is sound, I may say that the honey dealers, Messrs. W. H. Hoge & Co., of London, are now advertising the formation of a honey-producing and honey-selling company, with a capital of £80,000 (nearly $400,000) in 80,000 shares, of £1 each. They propose to purchase 10,000 colonies of bees in California; ship the honey produced to England, and sell it in the London market, both wholesale and retail. They say, as one inducement to speculators to join them, "the monopoly is complete." If a number of capitalists can do that, surely a number of honey-producers can also do it.

Now, if every legitimate honey-producer was to become a member of our union; and every union a member of a central union, they could control the honey market. They could keep an even supply in all the markets, so that St. Louis should not be glutted and Chicago short, or *vice versa*. Every producer would know just where to send his honey, and by a little organization, we could get regular honey railway cars, with an attendant who could travel with it, to collect the honey, once, twice, or three times per year, and so get better and safer carriage, delivery, etc. I believe the saved burstage and leakage would pay the extra expense of all this. In fact, it would seem that things have all the room to improve, and very little to go the other way.

When at a convention of honey-producers, a leading apiarist gets up and says they cannot calculate on getting more than 5 cents per pound net for honey, honey-producing is below par; for a man, if he is intelligent, desires something more than a bare existence, and that is about all honey at 5 cents per pound will give him. As to local honey markets' of course no man will sell in them at less than 10 cents per pound, and he would always be at liberty to sell at more. If every honey-producer were to decide that he would not sell at less than 10 cents net, in the city market, and 11 or 12 cents in the local market, but keep it first, honey would fetch higher prices. But just so long as men act on the principle of "every one for himself, and the devil take the hindmost," so long will the foremost not fare so well as he would if he co-operated with his fellows.

Again, we do not want to try to induce every body to become bee-keepers. Any person who really desires to become a bee keeper, by all means help him by advice, etc., but this trying to induce everybody to keep bees, I am convinced is going to benefit nobody. The idea I urge, will benefit alike all good bee-keepers, whether they combine bee-keeping with any other business or not; and it will cause a wide gulf between them and those who let the "bees work for nothing and board themselves," and whose only care is to get the honey every fall.

Finally, bee-keepers who agree with me in the above, do not let this matter rest by your simply saying, "That's a good idea;" but keep up the agitation until we get a "Bee-Keepers' Trade Union." No doubt many will read this article, look at the name of the writer, and say, "Kendall! who's he? He's nobody;" and so pass it by. Never mind who Kendall is, or who he is not. Call him Jones if you like, but consider the idea, which is not original with me, on its merits. If it is bad, give us a better. That "in union there is strength," is as true of bee-keepers as of others; and if we are wise we will work on it.

Austin, Texas.

For the American Bee Journal.

Improved Section Case.

FRANK A. EATON.

I have sent you one of my Section Cases to be placed in the BEE JOURNAL Museum. I believe the points of most importance in a section case are: 1. To have a case that the bees will enter and work in the most readily. 2. One from which the sections can be removed with ease, and that will keep the sections clean.

These are what I claim for my Case. The bees can enter all parts of it as readily as in any Case I know of. The sections can be removed at all times of the year with ease, and without reversing the Case (as with the Heddon Case), and driving them out, thus breaking out some of the honey.

The Heddon Case has some few points of merit, but they are so few that I would not use it. In the first place there is valuable space taken up with partitions; there is no protection from propolis and wax, to the bottom of the sections, and they are difficult to remove when full. These objections are all overcome in my Case.

I prefer, for the most of the comb honey, sections 4¼x4¼, and 7 to the foot. My Case is to be used without separators, and by using sections with narrow tops and bottoms, the bees will seldom bulge one comb into another.

In this Case the sections set perfectly compact, which economizes all of the valuable space above the brood-chamber. One or two tiers of sections can be used, as desired, in the same Case, by covering it with burlap, or any kind of cloth. With narrow top sections, it is very easy to tell when the bees are at work in them, or when they are full, by raising it.

It can be used to great advantage in out-door wintering, by leaving it on the hive and placing your cloth in the bottom and filling with chaff or leaves, which will make ventilation enough, and absorb the moisture during confinement, thereby preventing diarrhœa in winter. I do not claim that my Case is perfection itself, but I believe it to be practical, and in advance of any Case I know of.

Bluffton, Iowa.

[The Case is placed in the Museum for the examination of visitors.—Ed.]

For the American Bee Journal.

Surplus Cases—Bee-Diarrhœa.

JAMES HEDDON.

I have tried very hard to make some improvement upon my surplus comb honey Case. I cannot do it. I do not think that Mr. Dibbern has done it. I do not think that he is using my Case. I think my claims would not be broad enough to call his changes a Heddon Case. I have no claim upon the tin **T**.

I have never considered my Case best adapted to separators, though its solidity, cheapness, lightness and simplicity are such that I am not at all sure but that short separators going between the wood partitions of the Case just as it is, would be better, involving less complication taken all in all, than the Case described by Mr. Dibbern.

I am glad that he is not so far "off" as to throw away the invaluable bee-space. Our bee-spaces, however, never enlarge.

I will now mention what I believe two serious disadvantages with Mr. D.'s plan. 1. As his rows of sections are separated from each other at their bottoms by the thickness of the **T**, the same opening must exist at the top, with nothing but glue to fill it. 2. It always has been a fact, and will soon be more fully appreciated, that it is of great importance that we have, and stick to a standard size of brood frame and section.

Practically we have their measurements before us in the shape of standard Langstroth, and 4¼x4¼.

Now, I cannot make a light, strong, simple case to suit me; that is of a neat proper outside fit for the length of the standard Langstroth hive, and an inside fit for any given number of 4¼x4¼ sections. If all the wood in my divisions were in the end pieces, the case would be no heavier, but not as strong.

Mr. D. says that many cannot dispense with separators. By the way they rose up at the last Northwestern Convention in Chicago, it would seem that many can and are dispensing with them. I do not believe that many will wish to use them after using the 1½ inch section in my original Case.

I have never had any trouble in variation in size of sections. A section would need be exceedingly plump to refuse to go between the partitions; but I can readily see that 4 such plump sections might amount to a misfit in Mr. Dibbern's style of Case.

I do not think it advisable for us to change our sizes of sections except in width; and this we do, keeping that width always such that some whole number of sections will measure one foot. The 2-inch section is 6 to the foot; 1¾ scant, 7 to the foot; 1½, 8 to the foot. We can use all 3 sizes in one case at a time; and all 3 sizes fit the shipping crates equally well.

I have tried hard, and have come to the conclusion that for a surplus case without separators, the one I use cannot be improved. If I am mistaken, time and experience will show it.

I wish to say to Mr. Shepherd, with whom I well know how to sympathize, that my apiary has suffered with the ravages of that disease, more radically than his of last winter; and that, too, when not one drop of fall honey was in the hives, and the combs being well filled with rich, ripe basswood honey, well sealed, in a large, dry, warm cellar, and out-doors the same way. I have also, at other times, had excellent success when wintering almost exclusively on honey from the fall flowers he mentions.

Mr. Woodward is coming pretty near to the mark on page 249. His final conclusion, however, will not do. While it is true that brood-rearing is a friendly partner with bee-diarrhœa, it cannot be looked upon as the first cause, or more than one of the favorable conditions or aggravations, because many can testify to the disease in radical form with no attempts at breeding, present.

Dowagiac, Mich.

For the American Bee Journal.

Introducing Queens.

D. R. ROSEBROUGH.

A great many queens are lost when introducing them; but I have not lost one of the 25 I introduced the past year. My method is as follows: First find the queen you wish to supersede, cage her, and place the cage above the bees. It is better to have a one or 1½ story hive. I then move the quilt, put the cage with the wire down, and leave it in that position about one hour, by that time all the bees will learn that their queen is imprisoned. Now remove her, and put the new queen in the same place, leaving her until sundown, when she may be liberated, after which the work is completed.

The old way of caging the queen for 3 days, is a failure; for in that time the bees very often take up with a drone-laying queen, and the new queen is killed, and the colony about ruined.

Do the work in the morning, but if you cannot readily find the queen, close the hive again and wait; do not be in a hurry, for you can keep the new queen a week or more if necessary.

I would ask Prof. Cook why he objects to the use of oil-cloth in the place of a honey-board. I notice that he condemns the use of it, but gives no reason. I had concluded that it was the best thing to use, but if any thing else is better, I would like to find it out. Others besides myself are interested in this matter.

Casey, Ill.

For the American Bee Journal.

Winter Stores, Pollen, etc.

H. V. TRAIN.

Mr. A. A. Fradenburg, on page 76, asks me to explain, 1. Why his bees had diarrhœa when fed on clover honey. I did not intend saying that bees never would have diarrhœa while eating clover honey; but that clover honey is less apt to sour than late honey; and hence, is safer for winter food. There is no honey that will not sour under certain conditions; and even sugar syrup will sour sometimes and cause diarrhœa; but it is less apt to do so, if made thick, than fall honey, and hence, is safer for winter stores; and the same is true of clover honey. In question No. 2, he asks if I ever knew of a colony to have the diarrhœa when there was no pollen in the hive. I answer no; for the reason that I never knew of such a colony; and it is very difficult to get a colony in that condition. If we feed pure sugar syrup at any time when there is pollen in the fields, or its substitute to be had, the bees are sure to store either the pollen or its substitute, while storing the syrup. They will do this for the reason that it is a necessary article in their household operations.

Bees get a substitute for pollen from various sources. My kind of meal will do; and they get it even from sawdust. I have often seen them loading their baskets from sawdust heaps; and, unless, we give them combs which have never been in a brood-chamber, there will surely be some pollen in the combs. I have never yet succeeded in getting a colony into the cellar without some pollen, or its equivalent in the hive. Others may have done so, but unless they have examined very carefully, I should be inclined to doubt.

Honey will sour in one colony when it does not in another at its side, and in the same temperature. In one, the honey may be riper than in the other; or there may be more bees in the one than in the other, and hence, the difference.

Honey will not sour while covered with bees, or as warm as the bees' breath; but when honey outside of the cluster gets cold enough to condense their breath, or rather the vapor therein, it becomes wet, and if this is long continued, the honey will sour.

See Mr. Heddon's remark on page 74, under "Frost Proof House:" "But when below (that is the temperature), dampness will injure the honey at once." Every body knows if you breathe upon any cold non-conducting substance, it becomes wet at once; and every honey-producer is aware that if honey is kept wet, it will soon spoil.

Mauston, Wis.

Mahoning Valley, O., Convention.

The annual meeting was held at Newton Falls, O., on Thursday, April 10, 1884.

Pres. Carson asked, "What is peavine clover, its habits and growth?"

Mr. Page: It is a very rank-growing clover. Its seed matures from the first growth of the season, and I think, secretes a large quantity of sweets.

Mr. Ovitt asked, if a double-walled hive with a dead-air space was not preferable to packing with chaff, and said: I have noticed that those who pack with chaff are no more successful than others. I fear that the chaff will gather dampness and engender disease, while with the air-space, the natural warmth of the bees will dry this portion of the hive. I notice the most of my loss in wintering, is by not having proper ventilation; they smother, or there is not enough circulation.

Mr. Langton: I have tried for the last three years the dead-air packing, and my bees came through well. I have tried two methods of wintering in clamps, out-door and in a cellar. My way of out-door wintering is as follows: I dig a trench some 4 inches wider than the hives, and 8 inches deep on ground, well drained. Fill this space with chaff or fine cut straw, lay a plank lengthwise on the straw, place two strips 2 inches square running parallel with the plank; take the bottom off of the hives, and place them on these strips; then take boards and form an inverted-shaped covering; cover with straw a few inches deep, then with about 8 to 10 inches of soil. At one end of the clamp I put in a small ventilator; take four laths and nail them together, and let it reach down near the bottom of the hives. At the other end I put in another one lying horizontally and protruding through the bank of earth, and running through under the first hive, covered with a little straw to exclude the light. With this system of packing, I have never lost a colony. By it the bees are kept dormant, and there is a proper circulation of air. Bees kept in this way consume but little honey, compared with the old way of keeping them. My method of cellaring bees is as follows: I stand the hives 2 feet from the cellar wall, pack one tier above the other, if the room is limited; and ventilate as in the clamp process, by perpendicular ventilators run up into the room above. The percentage of loss is small by this process. As to giving bees a flight in winter, I do not practice it. If I find that they are uneasy and make a rumbling noise, I water them by placing an empty section inverted on the cap of the hive just under the carpet. They will drink readily, and then it is all quiet.

Mr. Page: I am aware that we can overdo the chaff packing. We pack too closely, and do not properly ventilate.

Mr. Bowman: The dead-air space is preferable to close chaff packing.

Mr. Ovitt: I tried the feeding of a colony which had no pollen, with sugar syrup, and was successful. For extracted honey this is a good process.

Mr. Bowman: If honey gathered late in the fall is not fit to winter bees on, is it right to offer it on the market?

Mr. Langton: We would be killing our own market; always sell a first-class article.

Mr. Paine: I have a quantity of not first quality of honey gathered late in the fall; what can I do with it?

Mr. Langton: Feed it in the spring when the bees are gathering pollen.

Adjourned till the afternoon.

First on the afternoon programme was the election of officers, which resulted as follows: For President, Leonard Carson; for Vice-President, S. S. Ovitt; for Secretary, E. W. Turner, Newton Falls; for Treasurer, H. A. Simmons; and an executive board of three, C. D. Kistler, C. R. Page, and C. G. Beardsly.

The subject of queen rearing was then discussed.

Mr. Bowman: First have a strong colony; remove the queen; examine the frames and find a nice frame of eggs, and watch carefully the hatching of each, or give a frame of eggs to a small nucleus, and let it rear a queen from this frame of eggs; as to testing of queens, I let them remain with the nucleus.

Mr. Page: I wish perfect cells. To do this I draw a knife across the top of the cells, sometimes cutting the comb in two, say 4 inches from the top of the frame.

Mr. Langton: I use a strip of foundation and destroy every other cell, so as to enlarge the distance between the cells.

Mr. Page: I use new combs.

"How early in the spring is it admissable to commence to feed your bees to stimulate brood-rearing?

Mr. Langton: I take my bees out of the cellar as soon as it is safe to do so. I thoroughly clean out the hives, insert the division-board, and commence to feed as soon as the bees commence to gather pollen.

Mr. Hammon: I live close to a flour mill; my bees have no trouble in gathering pollen.

Mr. Page: I clean out the hives; put the bees on as few frames as possible; feed pure honey, and about the first of May I go over the hives again, give them more frames, and get ready for business.

Mr. Langton: I even up my colonies about May 1; take frames from a strong colony and insert it into a weaker one, and work up a strong force in this way. Some colonies gathered as high as 120 pounds of honey last season.

Mr. Bowman: I put my bees into winter quarters, and do not disturb them until apple-bloom is over.

Mr. Simmons: I commence to feed early by giving them flour and granulated sugar. Maple syrup is one of the best sweets to feed bees.

Mr. Hammond: I prefer pure Italian bees.

Mr. Bowman: The Italians are the standard bees for gathering honey; the Cyprians are a good breed, especially the American bred.

Mr. Simmons: I think the Langstroth hive is preferable for all purposes; at least it is my choice.

Mr. Langton: The Simplicity-Langstroth hive is my preference.

Mr. Hammond: I have used all the modern hives, and find the Langstroth the least trouble.

Mr. Simmons: Millet clover is one of the best honey-producers; it blooms all the season.

Mr. Page: In my section of the country basswood abounds in the woods.

Mr. Bowman: I would plant locust and the tulip. Melilot clover is one of the best honey-producing plants.

It was moved that a vote of thanks be tendered Mr. W. Z. Hutchinson, and others for their able articles.

The President then appointed Mr. Hammond and Mr. Page as essayists for our next meeting.

Adjourned to meet in Newton Falls, on June 6, 1884.

E. W. TURNER, *Sec.*

LEONARD CARSON, *Pres.*

For the American Bee Journal.

Priority of Location.

J. E. POND, JR.

Mr. Heddon, in his article which he holds out to be an answer to myself, either misunderstands my position or forgets the nature of the article to which I replied; for he nowhere touches upon my own position in regard to the question. This being so, I should not feel called upon to reply further, were it not that Mr. H. claims that because I am a lawyer, I am not the best qualified person to decide the matter in dispute.

Now, without contending to boast of my intellectual qualifications, I fail wholly and entirely to see why the fact that I am a lawyer disqualifies me in any sense from forming and expressing a correct opinion.

But what is this question that a lawyer is not able to decide? Simply this: Mr. H., in the original article which drew a reply from me, assumed that no one had a *right* to locate an apiary in a field already occupied. To this position I demurred, and I still demur; and claim that one person has the same right as another to locate an apiary wherever he chooses.

As well might "the butcher, the baker, and the candle-stick maker" claim right of priority in a certain town, as for an apiarist so to do. Mr. H.'s whole article is an attempt to prove a matter which is not disputed by me, and one that I did not suppose was even a question of dispute, viz: that a fully occupied field cannot be further sub-divided without causing loss to all its occupants. This matter

I admit; but the question of priority of location giving a person any exclusive right of occupancy I deny, both as a lawyer and a man; and fail as yet to see any good reason why my denial is entitled to less weight because I am a lawyer.

Foxboro, Mass.

For the American Bee Journal.

Diarrhœa—Marketing Honey.

J. E. CADY.

Of the many causes producing disease in bees, I think worry is the main one. I have seen bees spot the hive in a few minutes after I had removed their queen, on a beautiful summer day. In winter frequent disturbance, even if they have the best of honey, will cause them to spot the hive. Scarcity of honey, either from granulation in the cells or by becoming sour, or in any way unsuitable for the sustenance of bee-life, and long confinement, will bring on the disease.

I do not think cold has any direct cause, but indirectly by causing honey to granulate, gather dampness, and sour. Pollen has nothing to do with it, except when it gathers dampness, ferments and mixes with the honey, then it has the same effect as sour honey, having lost its proper element as bee-food. We might as well exclude the honey from the hive for fear of its souring, as to exclude pollen. If bees are forced to eat pollen from a lack of honey, they will starve, and all will become sick if starved. Old bees cannot live a great while in the winter, even upon the nicest quality of pollen.

To supply proper food in sufficient quantities, is a long step in the right direction; but time will change the quality of honey in any cellar. My cellar is so dry that when I sweep up the bees, it raises a dust; and yet it is no place to keep honey in first-class condition, even in the summer. There are two outside hatchways to it, and it can be ventilated in a few moments, making it as nice as an upper room.

When brood-rearing begins in the spring, bees want water, especially if they are in a dry cellar; this causes a worry that makes them spot the hive. All hives should have a hole within easy reach of the bees, above the entrance that cannot be clogged with bees. In colonies which worry, the bees will come to this hole. Now, with an awl make a small hole about 1 inch above and a little to the right of the first one; press a tack into it, then hang a small wet cloth on the tack, so it will hang down by the opening in the hive; keep this cloth wet, and your bees will not suffer much from worry. If the honey has granulated, the water will assist them to eat it. If they still worry, it is evident that sour honey or a scarcity of stores is the cause. I have stopped 2 colonies with water alone, this spring. Towards spring keep the temperature down as low as possible; take every block from the entrance, give each colony plenty of ventilation, but on bright, warm days, close the ventilation of the cellar, and open it at night.

There will be a general worry towards spring that you can do nothing for except to sprinkle the fronts of the hives with water, or keep a wet cloth on the tack. The first pleasant day, when the temperature is 40° or 45° in the shade, set them out. If you use loose bottom-boards, clean off the dead bees as you set them out; then keep the entrances closed to within ½ an inch, to keep them from swarming out. Watch them closely to prevent accidental loss of swarms. Be sure to commence watering them the next day with warm water, at some convenient place near the yard. This will save many thousands of bees. Continue it all the spring, for it is one of the greatest helps in the business.

I have had 10 years experience in selling honey. When I began, I found comb honey, from the body of the hive in Langstroth frames, on the market at 30 cents per pound, and extracted honey was unknown. I run my apiary for both comb and extracted honey; about ¾ extracted. I began by convincing the druggists that my extracted honey was pure, and succeeded in selling them 500 pounds of white clover honey, at 25 cents per pound. It saved them 5 cents per pound, and the trouble of getting it from the comb themselves. I then sold my basswood honey from house to house, at 20 cents per pound, and I soon found that it was necessary to have a wholesale price, which I fixed at 16⅔ cents a pound, and succeeded in selling my whole honey crop (over 3,000 lbs.) in my home market. I sold 800 pounds of comb honey in two-pound sections at 25 cents per pound; this I have kept up with slight variation, and a steady decline in prices, till comb honey retails slowly at 20 cents; wholesale, good at 15 cents. For extracted honey, wholesale, 10 cents, and retail 12½ cents, with demand good. Almost a fabulous amount of pure honey was sold in this market, last year. My sales are, up to date, 6,000 pounds during the past year. I have used the pamphlet, "Honey as Food and Medicine," also a card of my own get up. I find these gives me a vantage ground; save much time, tell the people at a glance with whom they are dealing, save mistakes, bring me many orders and sales that I should not otherwise get, and hasten acquaintance. It takes years to establish a business integrity, which these help to gain more quickly. That is the foundation of success; it is our capital, and should be valued highly. I use these cards in the cities near me, deliver the honey in person when I get orders enough to pay me to go, but always take along more honey than is ordered. I receive but few orders for less than 25 pounds, and often 50 and 100 pounds. I sell a little cheaper by the hundred, but make no difference on 25 or 50 pounds.

To get the full advantage of circulars, a first-class quality of honey has to be delivered in every case; if not, the advertisement proves a damage; but now honey has to be a thoroughly good article, and well ripened in the hive.

Medford, Minn.

For the American Bee Journal.

My Report on Wintering.

JOHN YODER.

I put 53 colonies into the cellar Nov. 13, 1883, and took them out April 18, 1884. My cellar is 25x16 feet, made of stone and brick; and under the kitchen a 3-inch ventilating pipe reaches down from the chimney, then along the cellar floor to a little room 16x8, partitioned off one end of the cellar. Into this room I put the 53 colonies in 2 rows 4 deep; the bottom row standing on empty bee-hives. Each hive was setting on its own bottom-board, and each had an oat-hull cushion on the top, and also contained 30 pounds of good white honey. During all the forepart of the winter, the thermometer ranged from 42° to 46°, and the latter part 49°.

About Feb. 1, the bottom rows commenced to show signs of diarrhœa, and a little later the second row showed the same, and soiling the entrances of the hives badly. So the disease spread upward slowly. I could not well put them out without disturbing the top rows, which were as clean as when I put them in. When I put them out, I found the bottom rows had used nearly all their honey, the top rows using the least; but all quite clean inside. One had starved to death after using at least 30 pounds of good honey. One out of 53 is not bad I think. I took up 2 bushels of dead bees.

The last 2 winters my bees were in the same cellar, prepared the same way, and were in about the same length of time, and only consumed on an average 9 pounds of honey. I think my cellar was too warm, and there must have been some difference in temperature between the bottom and the top of the cellar, to cause the difference in the keeping of the bees; at all events I think the bottom rows commenced to breed, then commenced to eat pollen, thus causing diarrhœa. They must have bred a lot somewhere, and the old ones "jumped off the stage," or where would all the dead bees come from?

I hear of a great many bees dying in Elgin county and elsewhere. I use the Quinby hanging-frame hive with no division-boards, nor holes in the comb. I cannot see but what empty comb or combs, in a hive with a small colony in the centre, is not as well protected as though they had a division-board in them. The season is late, and there is not much pollen yet. It is very dry here. A little rain would make it jubilant for the bees.

Springfield, Ont., April 28, 1884.

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

For the American Bee Journal.

Description of my Hive.

G. I. WILLIS.

I make my hives about 3 inches deeper than the frames, which are 10x15 inches, inside measure. I nail on the side of the hive, in each corner, 1 inch strips 10¼ inches high. To these strips I nail laths about ¼ inch apart, and then fill with straw or chaff back of this, putting on a plate or strips reaching from one corner post or strip, to the other, thus making a 4-inch, permanent, chaff wall. Then put metal rests on these end plates for the frames to rest upon. My frames run lengthwise of the hive I make a passage way for the bees under one of the chaff walls.

For winter preparation, I take out all of the frames except 5 or 6, and put them in the centre of the hive, and slip my division-boards upon both sides of the frames, which leaves about 4 inches on either side. These spaces I fill with chaff or straw, and also on top of the frames. Thus the bees are completely encased in straw or chaff.

It is considerable work to prepare them in this way; but then, I think it pays every time. It is a great satisfaction to me to see my 28 colonies so snugly packed in this way. They all came through this extreme cold winter so nicely. Packed in this way, the brood-chamber is kept perfectly dry and warm.

My frames are closed ends, and top and bottom narrow, so they can be slipped up snugly together for packing, and yet not crush the bees. I have in my mind a device that can be used with narrow frames, to prevent them from coming together and crushing the bees.

The advantages of this hive for summer use is: 1. In the spring, as soon as the weather becomes warm, I take out the straw or chaff on the top and sides, and enlarge my hive to the capacity of 10 frames, as the bees need them.

2. It is so much easier to get to the frames than in a hive where they come up flush to the ends, and are stuck fast with propolis. With the frames resting on metal rests on the end plates, 3 inches from the ends of the hive, it is impossible for the bees to fasten them.

3. With the walls of the hive running 3 inches above the frames, and the roof made with a 3-inch strip on the sides, it gives plenty of room for a case of sections inside, without adding a second story; though if it is desired to add a second set of frames, I only need to put on a super or large section, and I have a complete two-story hive for extracting. The Root chaff-hive, as I understand it, is always a two-story. This, I think, would be an objection. Another advantage in having the sides, and ends also, run 3 inches above the frames, is that it gives room for chaff for winter packing.

I have always had a great deal of trouble in fastening foundation in the brood frames. Last season I experimented by putting it down to the bottom-bar, and leaving the space above; in this way it needs no rubbing down to the frame, or melted wax, or any fastening at all, other than the wires. The bees will run little fastenings along the wires at the top, and fasten them to the top bar, and then fill the spaces between. In this way I get a solid comb for extracting

I slant the roof of the hive like that of a house, and use shingles, double course, painting them well. This makes a roof that will not crack or leak, and will last for years.

Farmer City, Ill.

Woodstock, Ont., Convention.

The bee-keepers of Oxford County, Ont., held their first general meeting at Woodstock, on Saturday, April 19, at 10:30 a. m. After the routine business was disposed of, President J. B. Hall gave a report of his visit to Toronto in reference to the passage of a Bill relative to bees affected with foul brood.

A motion was passed authorizing the secretary to correspond with the secretary of the Ontario association, with a view to bringing about such united effort as will result in the passage of such a law.

The meeting adjourned till 1 p. m.

After the calling of the roll in the afternoon, the question of spring management of bees was taken up.

Dr. Duncan said that, as a rule, strong colonies will take care of themselves if they have sufficient food.

Mr. Hall said that weak colonies seldom paid for building up with brood taken from stronger colonies; while to stimulate with feeding would induce robbing to a great extent. As a rule he believed it best to let each colony stand on its own strength and resources, and if any failed to come up to the standard of excellence desired, double up and introduce a new queen, or give a queen-cell.

Mr. Frith said that management should begin in September, as the condition of the bees in the spring depended on that they were in when put into winter quarters.

Mr. Elpore did not favor building up weak colonies, by taking bees or brood from stronger ones.

Mr. Emigh said he thought plenty of food and heat were the principal requisites to secure strong colonies in the spring.

The question of spring feeding, or stimulation to induce breeding, was taken up, when the general impression seemed to be, that it did not pay until the weather became warm, and the season pretty well advanced.

Mr. Shannon said that bee-papers advanced the idea that as a general thing bees wintered inside were more subject to spring dwindling than those wintered out-of-doors; but he would like to hear the subject discussed.

Mr. Hall thought the cause for the idea being entertained, was due more to the fact that when colonies were taken out in the spring, they usually were very full of bees, a large portion of which were old and ready to die, while those wintered out-of-doors allowed the old bees more opportunity to come out, hence the dwindling was less perceptible.

Mr. Emigh said he found that late feeding was sure to induce dampness.

Mr. Frith spoke on the meteorological effects of air, showing that when a current of cool air was allowed to pass through a bee-house or cellar, when it came in contact with the warm air inside, it expanded, thereby absorbing dampness, leaving the house in a dry and proper condition.

A high temperature was considered far preferable in wintering, as there was less danger from diarrhœa by honey that was not sealed or ripe when going into winter quarters. From 55° to 60° was considered the most desirable temperature.

Mr. Tennant said his bees had eaten an unusually large quantity of honey in wintering. The temperature of his cellar averaged less than 45°, but he thought if the temperature had been higher, less honey would have been consumed.

Mr. Hall thought pollen was very useful, and served as an important factor in successful wintering.

The disease of foul brood in bees was next discussed.

Dr. Duncan made a clear and intelligent exposition of the disease and its cure. When the question: "Is there any known cause for foul brood?" was elicited, Mr. Hall replied that there were many theories, but no positively known cause.

It was considered best to destroy bees affected with foul brood rather than attempt a cure, as it would in all probability be the cheapest in the end.

The best method of increase was the next subject discussed.

Mr. Emigh thought if the colonies were doubled, that would be a sufficient increase, and would advise increase by natural swarming.

Mr. Malcolm said for those wishing increase, rather than take off honey, it would be safe to increase two, or even three fold, if the season were favorable.

M. S. Schell explained his method of securing an increase of colonies during the last season, which was simply by making nucleus taken from the strongest and giving them capped queen-cells or young queens reared from the best colonies, taking special precautions to keep the nucleus warm.

The following question was next placed on the table by Dr. Duncan: From which colonies will we receive the most honey; the ones that are prevented from swarming as much as possible, or those that are allowed to increase a reasonable amount?

Messrs. Hall and Emigh were both of the opinion that taking the average season, the most honey would be received from the colonies that were allowed to increase; of course the honey taken from the new colonies being included with the old one.

In reference to making a display of honey at the fall Agricultural Exhibition, it was resolved that the ex ecutive committee make such arrangements as may be deemed best.

Adjourned to meet on the 3d Saturday in next August, at 1 p. m.

For the American Bee Journal.

Review of Unsettled Points.

EDSON J. SMITH.

No report of a trial with comb foundation should be given to the world by one who has made such advancement in bee-culture as has Mr. Heddon, when such comb foundation as the Vandervort and Olm are left out; both of which are equal, if not superior to any which were used in his trial; and it does the manufacturers of both of the machines great injustice. The Vandervort is the leading machine in this vicinity, getting nearly all the wax to make up, in preference to other machines.

Last year I used over 600 frames filled with the Vandervort foundation, and but 4 of them sagged. I use no wire, as I consider it useless when foundation is fastened in as it should be.

Double-walled hives are taking the lead in this county. At least ¾ of the apiaries contain them, and the last year over 70 tons of comb honey was produced in them, in one and two-pound sections, and all being first-class honey. Though the losses were heavy in some localities last winter, here it was scarcely anything.

In the spring of 1881, my bees had come through the winter very strong, and bred up fast. About May 1 they commenced to bring in honey and pollen from the woods. The sun shone out in the morning very warm, there was no wind, and the bees went to the woods in large numbers; about 10 or 11 a. m., the wind blew up from the north very cold; and the bees on their return to the hives, became chilled, dropped on the ground and died. You could pick them up everywhere, loaded with pollen; and the consequence was that the colonies were not nearly so strong by May 15 as they were on April 1. Now, I know they were well wintered, and had the weather kept warm, they would not have dwindled; and yet, Mr. Heddon, on page 578 of the BEE JOURNAL for 1883, in reply to Mr. Mitchell's question, says: "It is my opinion that no bees ever spring dwindled that could rightfully be called well wintered."

If the wind comes from the north and blows hard and cold when the sun crosses the equinoctial in March, the bees will dwindle badly in the spring; but if the wind comes from the south, or if the weather is calm and the wind changeable, the effect on the bees will be opposite from the former condition.

Bees will not dwindle as badly in double-walled hives packed with chaff, or feel the excessive heat of summer, as in single-walled ones.

The black bees are the best to go to work in the sections, and build white comb which will take the first premium every time over that made by the Italians. The blacks are a hardier race of bees, less liable to swarm or abscond, do not breed so fast after the honey season is over, and will not cling to the comb nor rob as quickly as the Italians.

I cannot agree with Mr. H. in regard to separators being cheaper. I am getting out 2,000 of them for one-pound sections, each one being long enough for two sections, and 500 for two-pound sections; the whole cost of which will be $6.50, besides my own work, and I think they will last a lifetime.

Wood is preferable to tin for separators, as it is warmer and easier for the bees to cling to or climb on. As nearly all the honey in this county is glassed, we shall continue using separators, for we believe it pays to glass it when we can make $6 per day for washing and glassing; and then the dealers demand it. As a proof of this, one firm in this vicinity bought over 7 tons of honey last fall, all of which was glassed.

New England.

For the American Bee Journal.

Seneca County, O., Convention.

Met on Saturday, April 29, at Tiffin, with President Troxel in the chair.

"Early Spring Treatment" was the first topic discussed. Mr. Overmyer, of Sandusky county, advocated letting bees remain quiet, not disturbing them too much. After an examination sufficient to see whether they need feeding, and to see that none are motherless, they should then be left to themselves—no opening and breaking their clusters out of simple curiosity. Have a purpose when you open a colony, and when you do so, perform the operation as rapidly as possible, and then quit. They need to be kept warm so that breeding may go on rapidly. He advised using a division-board, and contracting the brood-chamber to the number of combs that the quantity of bees will cover and no more. As the weather gets warmer, and the bees increase in number, give more combs. Usually one comb at a time is sufficient, and always put the comb you give them in the centre, and not on the outside of the hive. In describing the different qualities of honey, he gave a description of a dark-colored honey the bees had gathered at his apiary in Ottawa county late in the season, from the tall cane growing on the low lands along Lake Erie. He found that any colonies going into winter quarters with any of this quality of honey uncapped, was fatal to the colony. The bees gathered this from the blades of the cane, and he believed, upon examination, that it was the product of a plant louse. He doubted very much whether there was any such thing as "honey dew."

Mr. Feasel thought it unnecessary to contract the space in brood-chamber, believing that the bees would see to that, and generate heat sufficient to protect and mature the brood. He had read in a bee-paper of a case where bees had generated heat sufficient to melt down their combs when the thermometer was below zero. He was quite sure that there was such a thing as honey dew when the conditions were favorable for its formation.

Mr. Martin did not believe in any such reports that bees could generate heat sufficient to melt down combs, when the thermometer was below zero. Bees, he said, had no nose, and did not breathe by means of lungs as animals do, nor yet by gills as fish do, but through small holes called spiracles under their wings. It was simply an impossibility for 40,000 bees—a strong colony—to inhale sufficient oxygen to produce that amount of heat. He believed that bees frequently, when severe cold continued for an unusual length of time, exhausted their physical strength and died from over-exertion, in their efforts to keep warm, by their rapid breathing, as that is the only means they have of increasing the temperature in their hives. We all know that one way to warm up, when very cold, is to breathe rapidly for a short time.

Adjourned till 1 p. m.

At 1 p. m. the association met with an increased attendance. A general examination of honey, hives, etc., took place.

"What kind of hive shall we use?" and "Bee Pasturage," were the topics for the afternoon session. Mr. Overmyer explained his process of transferring. He said he used two kinds of hives, the Langstroth and the Gallup. He believed in having large hives, so as to give plenty of room, and when any colony weakens from any cause, contract space by a division-board. He explained extracting honey, and said that last summer he obtained 41 barrels of honey from 175 colonies—spring count, in 9 days—mostly from linden, as white clover was very scarce in this locality.

Mr. Martin explained, for the beginners, the process of transferring and putting a new swarm into the hive. Would not transfer too early; not before the fruit trees are in bloom, and not then on any day when the bees could not fly in safety from cold blasts of wind. He preferred the standard Langstroth hive.

Mr. Feasel said he used the Langstroth hive and worked for comb honey; explaining fully his mode of securing honey in sections. He said if he obtained 25 pounds as an average from all colonies, old and young, it was equal to the large yields from spring count. Can take one good strong colony in his apiary, in early spring, and increase to 10 or 12 good colonies by the time white clover and linden open.

Mr. Troxel gave his experience with the Langstroth hive. He said he worked for both comb and extracted honey. He exhibited some very fine specimens of comb foundation, of his own manufacture.

The subject of "Bee Pasturage" was postponed until the next meeting.

Several new names were added to the membership list of the association, and the next meeting promises to be one of unusual interest.

Adjourned to meet May 17.

E. J. C. TROXEL, *Pres.*
J. T. MARTIN, *Sec.*

SELECTIONS FROM OUR LETTER BOX

White Clover Looks Promising.

My bees are all in fine condition; no loss in wintering. This is the fourth winter I have packed my bees in chaff out-of-doors without loss, and I am still satisfied with chaff packing. Bees are now gathering honey rapidly, and building comb. Everything bids fair for a good honey crop. White clover never looked better at this time of the year, and this is from which we get our honey, if we get any surplus at all. The Langstroth hive is taking the lead in this locality, and the deep frame is becoming a thing of the past. Bees suffered terribly during March and April, where they were not protected; many have lost all either by spring dwindling or robbing. J. G. NORTON.

Macomb, Ill., May 1, 1884.

Bees Starving in June.

I think there is no foul brood in this section of the State. There are many who keep a few colonies, and some lose all by starvation in June. I live in the Blue river valley, and in the spring the bees work on maple, willow, gooseberry and raspberry blossoms; but in June, for about three weeks, nothing blooms, and the bees have to be fed. After July 1, comes sumac, heart's-ease, snowdrop, catnip, etc., until frost, and bees do well during this time. I have 15 colonies of hybrid bees, which I expected to increase to 50, but the weather has been very cold and wet.

DAVID M. IMLAY.

Seward, Neb., April 28, 1884.

All is Lovely with my Bees.

My bees wintered well in the cellar. In 30 colonies there is not one moldy comb. The tops of the hives were all removed, and the honey boads left open. I am satisfied that more bees die from lack of ventilation than from any other cause. The first fruit blossoms have just appeared, and to-day the cherry-trees are alive with the busy workers. We are expecting a good honey season.

I. P. WILSON.

Burlington, Iowa, May 2, 1884.

Bees Swarming.

Bees have been doing nothing up to the 25th, but stock up in brood. For the last few days they have been doing finely; accomplishing more in the last four days than in all the rest of the spring put together. It has been cold and wet all through April. Not many colonies have swarmed, and those which did so, took to the woods. The first swarm from a colony would stay and do finely, then the weather turned cold, the young queens all hatched out, and when they would come out, the bees would follow them and all make for the woods. I suppose it was owing to their coming out to be mated, and the bees would follow them. If I am not correct in this, will some one give me the reason? I had as many as 3 swarms from one colony in the same day. I examined and cut out all the cells except one, and stopped the swarming. Hope I will not have many swarms this season.

DR. H. M. WILLIAMS.

Bowden, Ga., April 30, 1884.

Wintered Well.

Bees in Central Ohio wintered well. The colonies are now strong in numbers. White clover is promising. I think we shall have an abundant honey crop. AARON BENEDICT.

Bennington, O., May 6, 1884.

Moving Bees 200 Miles.

For 4 years I have been engaged in bee-culture; but I have been residing in a rather unfavorable location (Bates Co., Mo.) for the business, until April 3, 1884, when I shipped my 50 colonies to Carrollton, Mo. They were in the car about 30 hours, and were moved a distance of over 200 miles. In these colonies are 600 nice, straight combs in movable frames, and all came through with the loss of only 3 combs broken; but the bees were in fine condition after their trip. My bees are nearly all Italians. I am very much interested in bee-culture, and shall continue making it a study.

ELI E. STARKEY.

Carrollton, Mo., May 5, 1884.

Heavy Losses of Bees.

Our bees at the College are doing well. I am sorry to learn that the losses have been heavy in many parts of the country. The time when ignorant bee-keeping would succeed, is gone by. A. J. COOK.

Lansing, Mich., May 7, 1884.

Fruit in Bloom, but no Nectar.

Ninety out of 96 colonies came through the winter. Sixty, which were covered with fodder, did not winter as well as the 36 in double-walled hives on the summer stands. The 6 lost were among those covered, and 2 of them were unusually strong when covered last fall. Some drone brood is now sealed with a few drones out of the cells. Some drones were kept through the winter. Wet, cool weather has delayed breeding, and bees are still inclined to rob, with a profusion of fruit-bloom open; but the cool nights prevent a secretion of nectar. Some colonies have too much honey left. Figwort has come up very thickly where the plants were cultivated among the corn last year. The prospect is good for a fine honey-flow. WILLIAM CAMM.

Murrayville, Ill., May 4, 1884.

Bees Gathering Honey.

Bees are gathering honey rapidly from the early yellow flowers. I do not know their name.

WICKLIFF FISHER.

Hamler, O., May 5, 1884.

Smart-Weed Honey.

On page 267, D. R. Rosebrough complains that his bees did not winter well on late honey. I want to ask him if there was any smart-weed bloom in his locality. A few years ago, in this locality, we had no honey crop until smart-weed bloom; it was thick all over the country; and bees were in need, and worked it very greedily; and the result of this honey (or something else it may be), was that nearly all the bees died during the winter, or left the hive the first warm days of spring. I think I am safe in saying that not one colony in 10 survived to May 1. They left the hives full of honey, but filthy. I re-hived one dissatisfied colony three times, but could not make it stay. I am satisfied that the trouble was in the honey, and have about condemned smart-weed as unfit for winter stores. If I am wrong, I would like to be convinced, for we can nearly always depend on a crop of smart-weed here.

J. B. MILLER.

Montezuma, Iowa, May 1, 1884.

Bees Confined 161 Days.

My bees wintered nicely; part of them being in the cellar and the rest on the summer stands. One colony did not have a flight for 161 days, and it came through in good condition.

G. W. DUNBAR.

Embden Centre, Me., May 5, 1884.

Small Loss in Wintering.

Bees in this section are in for a big boom this season. I never saw them in as fine condition at this time of the year, and the loss of the past winter will not average 1 per cent. The greatest loss was with myself. I have only a very small portion of my apiary left, but hope for the best.

J. H. ROBERTSON.

Pewamo, Mich., May 6, 1884.

Good Increase.

I started one year ago with 3 colonies, and now I have 10 strong ones. I lost one colony by not giving it enough bees last fall. There was not more than 1 pint of bees in the hive, and they froze to death. I use the Armstrong hive. I wintered my bees out-doors on a north slope of ground, fully exposed. The trees are just commencing to bloom, and the bees are beginning to work, but I have not the time to manage them as they should be. P. E. VANDENBURG.

Jerseyville, Ill., May 3, 1884.

Juneberry.

For more than 10 days past the bees have been diligently at work among the Juneberry (*Amelanchier canadensis*) blossoms. In this vicinity these little trees are very abundant along the creeks and rivers, and are always white with blossoms long before the apple and plum trees bloom. In favorable weather it yields honey profusely; and up to date the bees here have stored from 3 to 8 pounds per colony, and are still at work. The honey is of a light brown color, several shades lighter than buckwheat honey. Coming early into bloom as it does, and at a time when there are no other honey-bearing flowers to speak of, the Juneberry occupies an important place among honey plants. The Juneberry tree is receiving considerable attention at present among horticulturists, for its fruit. A number of cultivated European varieties are now being tested in our College nursery. F. A. HUNTLEY.

Ames, Iowa, May 6, 1884.

Local Convention Directory.

1884. *Time and place of Meeting.*

May 16.—N. E. Kansas, at Hiawatha, Kans.
L. C. Clark, Sec.

May 17.—N. E. Ky., at Covington, Ky.
Adie O. Robertson.

May 20.—N. W. Ills., and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

June 6.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Wax, Queens, Out-Door Feeding, etc.

1. What is the degree of temperature above which wax should not be heated ?

2. How shall I dispose of the cappings, and rid them of the adhering honey, when I extract ? I have purchased an extractor, but never used one, or saw one in operation.

3. Is it better to let colonies rear their own queens, or to give them cells from choice stock, or a thoroughbred queen ?

4. Will out-door feeding stop robbing ?

5. How are wax comb-guides made?

6. Do bees produce wax at pleasure?

7. Will mixed races of bees degenerate if allowed to rear their own queens ? DAVID M. IMLAY.

Seward, Neb., April 28, 1884.

ANSWERS.—1. It should not be heated sufficiently to scorch it. My experience has led me never to heat it to a higher degree than is absolutely necessary.

2. Cappings should be first scraped into a receptacle with a coarse wire cloth bottom, till drained all thoroughly. Then place them loosely in flat pans, which put into an oven up from the bottom, with one of the oven doors a few inches ajar. Watch closely, and just as soon as all is melted, set it out to cool. The wax will cake over the top, and while the honey below is yet warm, tap the wax cake at its edge, tip up the pan, and as nice honey as you ever saw will flow all clean from below the wax cake.

3. No; do not let the divided bees rear their own queen. Give them either a fully developed queen-cell or young queens.

4. Out-door feeding at certain times, if done just right, might stop robbing, but would need be persisted in till the natural honey flow took its place. With the inexperienced there will be great danger of encouraging robbing, and that, too, to a demoralizing extent.

5. Wax comb guides are things of the past. They were never practical, as they were not positively successful. Narrow strips of comb foundation (I would advise them not over ¾ of an inch wide), are the very best comb guides known. What is still better and more economical, in the end, is full sheets of comb foundation not too heavy, and in brood frames, pressed upon wires.

6. My opinion is that the production of wax is optional with the bees.

7. No. No race or mixture of races will degenerate by raising their own queens. My opinion is that many breeders do not get as good queens as the bees would rear if left to themselves. The bee-keeper has this advantage; he can rear all queens from a few colonies of superior traits of character, thus improving his stock from year to year. Breeding in the good and out the bad qualities of his stock. He can rear at will as good queens as are ever produced, if he knows how, and takes the pains.

Convention Notices.

☞ The Mahoning Valley Bee-Keepers' Association will hold its next meeting at Newton Falls, O., on June 6, 1884. It is desired that a display of apiarian supplies and samples of honey be made at that time. Mr. Hammon, of Bristolville, and Mr. C. R. Page, of Streetsborough, will read practical essays on topics pertaining to bee-keeping.

E. W. TURNER, *Sec.*
LEONARD CARSON, *Pres.*

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☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, will be held at Rockton, Winnebago Co., Ills., on May 20, 1884.

JONATHAN STEWART, *Sec.*

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☞ Under a resolution adopted at the last meeting, an extra session of the Northeastern Kentucky Bee-Keepers' Association is called to meet at Covington, Ky., on Saturday, May 17, 1884, at 9 a. m., for the purpose of transacting such business as may come before it. It is hoped there will be a full attendance of the bee-keepers of Northeastern Kentucky. Membership fee, 50 cents.

ADIE O. ROBERTSON,
Chm. Ex. Com.

☞ There will be a meeting of the Northeastern Kansas Bee-Keepers' Association, at Hiawatha, Brown Co., on May 16, 1884. A general attendance of bee-keepers is expected.

Granada, Kan. L. C. CLARK, *Sec.*

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☞ The bee-keepers of Tuscarawas County will meet in the Town Hall at Port Washington, O., on Thursday, May 15, 1884, to organize a bee-keepers' association. All are earnestly invited to attend.

A. A. FRADENBURG.

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Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 12, 1884.

The following are the latest quotations for honey and beeswax received up to this hour :

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 14@16c. Dark and second quality, 13@14c; extracted white clover in kegs and barrels, 8@9c.

BEESWAX—Prime yellow, 34@35c.

THURBER, WHYLAND & CO.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—Extracted honey is a drug here. Very little of it is being used for manufacturing or baking purposes. Parties who last season used from 500 to 600 pounds, have for the past winter, bought not to exceed 100 pounds in a like period of time. Many producers are anxious to realize on their last season's product, but it is impossible to find purchasers, even at the low price of 6 and 7 cents per pound. Comb honey, stocks well reduced, but prices are low for anything short of fancy, quotable at 8@16c per lb.

BEESWAX—Scarce at 30@37c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Only in a small jobbing way is there anything doing. Market is easy at the quotations, holders being anxious to close out stocks. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—Demand for choice comb still good, and moving freely at 15@16c for 2 lb. sections. Market bare of 1 lbs. at present, with considerable inquiry for them. Extracted in fair demand at 8½@9c for white, and 7@8c for dark. Very little of the latter now in this market, and a few thousand pounds would meet with very ready sale.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—Market continues very fair, particularly for choice 1 lb. sections, which are in good demand at 18c; 2 lbs. do not sell so readily, but in the absence of 1 lbs. it moves at 17c. Second quality is very slow at 14@15c, and extracted not wanted at all in any shape.

BEESWAX—Very scarce; would bring 35 cts. on arrival for choice yellow.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8½c.

GEO. W. MEADE & CO., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

"STUFF FOR STINGS."

Will cure all kinds of Bee-Stings. No more swelled Fingers and Faces. Will refund money if it fails. Per bottle, **25c.** in stamps.

Monmouth Apiary, Freehold, N. J.

20A1t F. C. LOCKWOOD.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid ....in May and June, each....$	.50
Italian—untested—not warranted, in May and June, each......	1.00
Italian—warranted, May and June, each.....	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids........	7.00
Full colonies of Italians........	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

Imported Italian Queens.

We made an arrangement to get them from the best location in Italy, while we were there a few months ago. Orders solicited.

19A2t **MUCCI & BRO**, LEXINGTON, KY.

STANLEY'S
Automatic Honey Extractor
AND SMOKER.

Send for descriptive Circular and Prices to

G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

NEW AND USEFUL
Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY**, Wenham, Mass.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

HELLO! HELLO!

We are now ready to Book Orders for

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White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

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65 *ENGRAVINGS*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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Sixth Thousand Just Published!

New and Enlarged Edition

OF

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

SECTION BOXES!

One-pieced and four-pieced, 4¼x4¼, per 1,000, **$4.25**; 5¼x6¼, per 1,000, **$4.75**. Odd sizes made to order. Send for sample.

J. P. McGREGOR,
20A1t Freeland, Saginaw Co., Mich.

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

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For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

BEE-KEEPERS'

SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 3 cents per pound** above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS.

The present prices are as follows:

White Clover, $15.00 per bushel, $4.00 per peck, or 30 cts. per pound.
Alsike Clover, $12 00 per bushel, $3.25 per peck, or 25 cts. per pound.
Sweet Clover, $10.00 per bushel, $2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE

For Brood Frames.

One ounce spools, each, - 4 cents.
Postage, 2 cents extra.
One oz. spools, per dozen, 40 cents.
Postage, 13 cents extra.
One pound spools, each, 40 cents.
Postage 18 cents extra.
One pound will wire about 175 frames.

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new. Price. 50c. by mail.; 40c. by express.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

CHEAP FOUNDATION MILLS.

These Mills will make Foundation of any desired thickness, for either Section Boxes or Brood Frames.

PRICES:

4 inch Rolls	$10.00.
6 " "	15.00.
10 " "	25.00.
12 " "	40.00.
14 " "	50.00.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

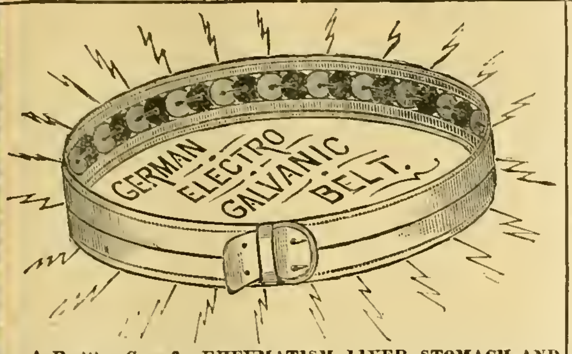
ALFRED H. NEWMAN,

923 West Madison Street,
CHICAGO, - - ILLINOIS.

Special Offer For 90 days

THE BEST ELECTRIC BELT EVER MADE ONLY $1

Having obtained the sole right to sell the **German Electro-Galvanic** Belt in America from the inventor, Prof. Conrad Ziegenfust of Berlin, we are determined, whatever may be the cost, to introduce them here at once. The price of the Belt has always been **Six Dollars ($6.00)**, but to induce invalids to give it a trial we will, for the next ninety days, send the **German Electro-Galvanic Belt for ONE DOLLAR**, provided you will cut out and send us the annexed coupon and give us your written promise to recommend the Belt if you find it as represented. This Belt is without doubt the best, strongest, and most scientifically constructed Electric Appliance ever introduced, being the invention of the great German Electrician, Prof. Ziegenfust, and has met with the most marvelous success in Europe, being recommended and endorsed by the entire Medical Profession of Germany. The Inventor has in his possession letters from **Prince Bismarck** and several members of the **Royal Family**. A quarter of a million of them were sold in the German Empire last year. These Belts, unlike many so-called electric appliances, are very light and not disagreeable to wear, and generate a current that can be immediately felt. Their action is stimulating and at the same time soothing; causing the Stomach, Liver, Kidneys and Nervous System to act as nature intended they should. Curing thousands of cases that internal medicines failed even to relieve. Under no circumstances can it do any harm and must do good no matter what is the complaint. They are made of cloth, silk lined, and the Electric Discs are so arranged that they retain their strength *20* years.



A Positive Cure for RHEUMATISM, LIVER, STOMACH AND KIDNEY DISEASES, DISEASES OF THE BLOOD, SKIN DISEASES, FEMALE COMPLAINTS, PARALYSIS, NEURALGIA, CATARRH, LAME BACK, AND NERVOUS DEBILITY.

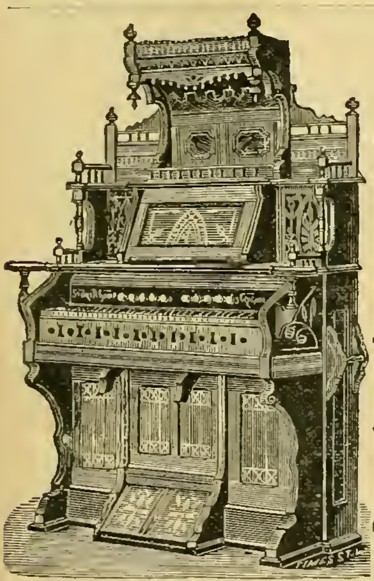
This Coupon is worth $5.00.

If you will cut out this Coupon and send it to us with ONE DOLLAR in a registered letter we will send you postpaid by return mail, One
GERMAN ELECTRO-GALVANIC BELT
with full directions in both English and German. Write Name and Post Office Address very plainly and give your waist measure in inches.
FORREST & CO., Sole Agents,
116 Flatbush Avenue, Brooklyn, N. Y.

CUT THIS OUT.

ORDER AT ONCE from this Advertisement. Nothing saved by correspondence. *Good Agents Wanted.* Circulars in German and English.

Address, naming this paper, **FORREST & CO., Sole Agents, 116 Flatbush Avenue, Brooklyn, N.Y.**



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Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

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The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

Write for our prices before buying elsewhere.

STORY & CAMP,

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CHICAGO.

203 N. Fifth Street,
ST. LOUIS.

Italian Queens! Nuclei.

SECOND TO NONE! ORDER NOW!

I rear my QUEENS by the best methods and from the best stocks for business. I send out no Queens that I would not keep in my own apiary. To convince you, send me an order. I will please you.

	June	July
Queens, untested	$1.50	$1.25
" tested	2.50	2.00

	June or July
Nuclei, 1 frame (L. size)	1.00
" 2 "	2.00
" 3 "	2.50

Price of Queen to be added to prices of Nuclei. Will give special rates to parties who want two or three Nuclei with tested or untested Queens. Address,

W. C. LESTER,
Washington Hollow, Dutchess Co., N. Y.
18A3t

HELP WANTED.—1 agent wanted in every place to sell our new goods. Big pay. 40 samples only 10c. None free. Cut this out. Acme Novelty Co., Clintonville, Conn.
13A8t

Bees, Hives, Extractors, Smokers, Dadant Foundation, and other Supplies. ARTHUR TODD, Germantown, Philadelphia, Pa. 19A5t

Bingham Smoker

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

ITALIAN QUEENS, DADANT FOUNdation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

ITALIAN BEES

AT BED ROCK PRICES.

COLONIES—8 Langstroth Frames, in light shipping box	$ 4.50
8 Thomas Frames, in light shipping box	3.00
NUCLEI—2 or more, with tested queen	2.00
2 or more, with untested queen	1.50
QUEENS—Tested, by mail	2.00
Untested, by mail	1.00

After June 1st, 25 per cent. off.

After June 1, tested, per dozen	12.00
After June 1, untested, per dozen	9.00

Reared from Imported or Selected home-bred Mothers. No Foul Brood ever known here. Address, **C. WEEKS,**
17A4t CLIFTON, Wayne Co., TENN.

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

Early Spring! Order Now!

To introduce my Italian Queens, I will send one of my Tested Queens, if ordered before May 20th, for $2. Warranted Queens, $1. Send $2 and less, in common letters, at my risk. **E. P. BAKER,**
10A11t Box 342, DES MOINES, IOWA.

CHEAP! CHEAP!

Full Colonies. Nuclei and Italian Queens. Send for Price List before buying elsewhere.
DAN. WHITE, New London, Ohio.
18A5t 5B1t

The Eureka Wiring Tool

For pressing wire into Foundation. **Price, by mail, 50 cents.** Send for Circulars. FOUNDATION and EXTRACTORS for sale.
17Atf **C. M. RULAND, Rockton, Ill.**

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY,** Wenham, Mass.

1868. 1884.

HEDDON'S
COLUMN.

BEST GIVEN
COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey	$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,
JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.
MRS. FRANCES DUNHAM, De Pere, Wis.

Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.

Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.

Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.

All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.

Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNHAM: Kenton, Ohio, Dec. 29, 1883.

After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.

I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa. and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is to me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to

FRANCES DUNHAM, De Pere, Wis.

2BCtf

NEW Vegetables
A Specialty.
GREGORY'S
SEED
CATALOGUE
1854.-1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all.

JAMES J. H. GREGORY, SEED GROWER, MARBLEHEAD, MASS.

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."

GEO. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,
Lock box 995, Belleville, St. Clair Co., Ills.
18A13t 6B3t

DOUGHERTY & McKEE,
Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS, before ordering your APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

—THE—
VICTOR HIVE

is operated upon a new principle by which the sections are placed in vertical lines with the brood frames; continuous passages being effected in a

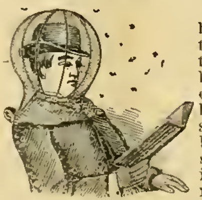
Practical Manner!

It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

ALFRED H. NEWMAN,
923 West Madison Street,
CHICAGO, - ILLINOIS.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY

BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago. Ill., May 21, 1884.

VOL. XX.—No. 21.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **$1**.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in cloth.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

◆

FOREIGN POSTAGE, EXTRA:

To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the Chicago P. O. as Second Class Matter.

ADVERTISING RATES.

20 cents per line of space, each Insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* **7** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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☞ The ninth annual session of the American Association of nursery men, florists, seedsmen, and kindred interests, will be held at the Sherman House, Chicago, Ill., commencing on Wednesday, June 18, 1884, at 10 o'clock a. m., and continuing three days.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

☞ Letters for publication must be written on a separate piece of paper from items of business.

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00	
and Cook's Manual, last edition (in cloth)	3 25	3 00
Cook's Manual, (in paper covers)	3 00	2 50
Bees and Honey (T.G.Newman) cloth	3 00	2 75
Bees and Honey (paper covers)	2 75	2 50
Binder for Weekly Bee Journal	2 75	2 50
Apiary Register for 200 colonies	3 50	3 25
Dzierzon's New Bee Book (cloth)	4 00	3 00
Dzierzon's New Book (paper covers)	3 50	2 75
Quinby's New Bee-Keeping.	3 50	3 25
Langstroth's Standard Work	4 00	3 75
Root's A B C of Bee Culture (cloth)	3 25	3 00
Alley's Queen Rearing	3 00	2 75
Scribner's Lumber and Log Book	2 35	2 25
Fisher's Grain Tables	2 40	2 25
Moore's Universal Assistant	4 50	4 25
Honey as Food & Medicine, 100 Copies	4 50	4 25
Blessed Bees	2 75	2 50
King's Text Book	3 00	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00	2 75
Bee-Keepers' Magazine (A.J.King).	3 00	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50	2 35
Kansas Bee-Keeper	3 00	2 75
The Apiculturist, (Silas M. Locke)	3 00	2 75
New Eng. Apiarian, (W.W.Merrill)	2 75	2 50
British Bee Journal	3 75	3 50
The 8 above-named papers	9 00	7 75

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

Best Advertising Medium.

Having advertised in the AMERICAN BEE JOURNAL quite extensively for the past two years, I would say (without solicitation) that it has sold more queens for me than any other three periodicals I have ever tried.

My bees are in fine condition this spring. I have lost but 4 out of 182 colonies. The outlook is fine for a good season.

L. J. DIEHL.

Butler, Ind., May 7, 1884.

◆

☞ The Mahoning Valley Bee-Keepers' Association will hold its next meeting at Newton Falls, O., on June 6, 1884. It is desired that a display of apiarian supplies and samples of honey be made at that time. Mr. Hammon, of Bristolville, and Mr. C. R. Page, of Streetsborough, will read practical essays on topics pertaining to bee-keeping.

E. W. TURNER, *Sec.*
LEONARD CARSON, *Pres.*

Advertisements.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

A. H. NEWMAN, Chicago, Ill.,
C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH, Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with **150 COMPLIMENTARY**, and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

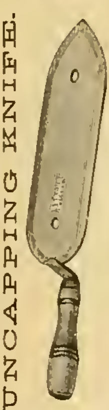
CHAS. DADANT & SON,
5AB1y HAMILTON, Hancock Co., ILL.

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM.
MAYSVILLE, KY.

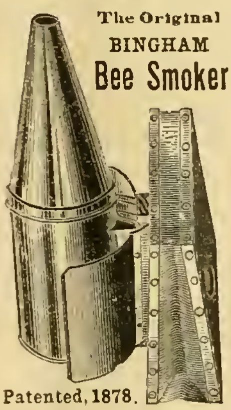
37A1y

VALUABLE

ORIGINAL PATENTS.



BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



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Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände—Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung derKönigin—Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Zuſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält esein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchrieben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellung über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung desHonigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonſect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

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THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., MAY 21, 1884. No. 21.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Convention Hand-Book.

This is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports — a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather. with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

◆

☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

◆

☞ Mr. Geo. E. Hilton was married on Thursday, May 15, 1884, to Miss Lizzie Copeland, at Fremont, Mich. The BEE JOURNAL extends its compliments, and hopes that life's journey will be a pleasant one to the happy couple.

☞ The World's Exposition to be held at New Orleans, La., next winter, is engrossing considerable attention, and Mr. Paul L. Viallon, of Bayou Goula, La., writes us as follows concerning it:

> Do you not think it advisable to have a grand meeting of the bee-keepers of the United States, at New Orleans, during the Exposition? Would it not be possible for the North American Bee-Keepers' Association to have their convention in New Orleans during the Exposition—say in March or April next?

It would be a grand thing for the Southern bee-keepers to assemble and have a rousing time. The National Society might appoint the next meeting at New Orleans, in April, 1885, as suggested by Mr. Viallon, and afford an excellent opportunity for many to attend who have heretofore never done so.

◆

☞ The article on page 313 was written by the Rev. G. T. Willis, of Hoopeston, Ill., and not G. I. Willis, of Farmer City, Ill. The initial was written very indistinctly, and no address was given. We put on the only P. O. stamp readable—supposing that was right, in the absence of the address by the writer. It is very annoying to find a name written so that it is difficult to read, but many write it more indistinctly than anything else in a letter; it is so familiar to them that they take no pains in writing it. We wish every one would bear in mind the fact that the name and address should always be written plainly.

◆

☞ It is extravagant economy to delay ordering hives, sections, foundation, etc., till the last moment, or till they are needed for use; for frequently a dealer finds it impossible to fill orders promptly when they are all held back till the last moment. Then, in the rush, many are disappointed. Therefore we would say to all, order early, and save yourselves much vexation and disappointment.

☞ Surely the world moves! In a circular on our desk, issued by a commission merchant, we find this explanation concerning the granulation of honey:

> "By simply placing the can or glass in warm water, the honey will return to its liquid state. The honey is in nowise injured by its candying. Our large English and German orders for California honey, nearly all now explicitly state: 'Candied honey preferred,' as they well know that the very fact of its candying is one evidence of its purity."

It is but a short time ago that candied honey was condemned as sugar—and thought to be worthless by merchants who happened to have it in stock.

◆

☞ We have received these late Price Lists of bee-keepers' supplies:

T. Pierce, Gansevoort, N. Y.
W. C. R. Kemp, Orleans Ind.
W. T. Stewart, Eminence, Ky.

◆

"EVERYBODY'S PAINT BOOK," a complete guide to the art of out-door and in-door painting, designed for the special use of those who wish to do their own work, and consisting of practical lessons in plain painting, varnishing, polishing, staining, paper-hanging, kalsomining, etc.; as well as directions for renovating furniture, and hints on artistic work for home decoration, together with a full description of the tools and materials used. Precise directions are given for mixing paints for all purposes. Illustrated. By F. B. Gardner.

We acknowledge a copy of this book from the publisher. It should be in every household. We can supply it. Price, $1.00.

◆

☞ Some whose subscriptions ran out with last month, are disappointed because we cannot supply any more back numbers. All should renew as soon as they receive their Journal marked on the first page with a blue pencil, and thus save annoyance; or have their papers marked to continue without being stopped at all. We wish all who desire it continuously, would notify us to mark it so on our books.

CORRESPONDENCE

For the American Bee Journal.

Queens—Diarrhœa.

A. R. KOHNKE.

If, as Mr. Doolittle admits, that hybrid queens "will produce workers of the *best type* to produce comb honey," because "a direct cross always produces vigor," why should a cross of the second degree, when queen and drone are bred from such vigorous colonies, deteriorate? Should they not, according to the claims of the advocates of pure-bred stock, produce a still more vigorous type of bees?

Taking the dollar queen, as bred and sold by reliable breeders, as representing the real unit-value of a queen, how does it increase the value of that queen, to the buyer, by being kept by the breeder long enough to test her?

It may be said, the breeder charges that much more for his trouble, for which he should be paid; but that is not the question. I am asking this question with reference to the buyer, not the seller. Is a tested or any other queen worth more than one dollar to the honey-producer? It is my experience, and I believe that of most honey-producers, that individual queens and their offspring are changeable?

Mr. Heddon is reported to have put the question in some convention, like this: "Why will a colony one season out-do all the rest, and the next do almost nothing; and then again in another season excel all others in furnishing a surplus, and all this takes place when the colony is of apparently the same strength one season as well as another?" Does it not prove that queens are not at all reliable? May not a dollar queen produce a colony of excellent workers, and a select tested one prove to be worthless to the honey-producer? It cannot even be said, the chances are against the former. I am quite confident that no breeder of high-priced queens will guarantee the amount of honey the offspring of his queens will gather in a good locality.

It appears that some bee-keepers suppose that some of the fraternity think pollen to be the first, last, and only cause of the bee-diarrhœa. I do not know, nor have I read of a single bee-keeper who has expressed his belief to that effect. But one thing is certain, if the bees had no pollen to eat, then their evacuation could not be largely composed of undigested pollen, of which it does, and thus constitutes the disease.

I lost 10 per cent. during the past winter, by different causes, among which some died of diarrhœa. Two of them had it as early as November, when we had several days of quite warm weather each week. One of the two was the strongest and heaviest colony I had. I think, when preparing them for winter the latter part of September, I may have killed the queen, and instead of clustering, the bees kept up a continual turnmoil, not keeping warm enough.

I have noticed in all my colonies thus affected, two conditions which precede or accompany the disease. 1. A colony thus affected, or very nearly so, presents to a hand held above the cluster on top of the cover, a sensation which I cannot compare to anything better than the body of a person about to die—cold and clammy. 2. The degree of the disease with my colonies seemed to be in an inverse proportion to the size of entrance, though I had all of them entirely open; they varied in height nearly ¼ of an inch. I have made them all now a full ½ inch.

Insufficient ventilation may be a factor to be taken into consideration in accounting for the cause of the disease; but when some one says, it is caused by "inflammation," that word cannot be used regarding any conditions to which bees may be subject.

Nor do I believe they are ever troubled with consumption or neuralgia. If bees were nearer related to mammals, than they are, we would be better enabled to understand their body, and the causes and conditions producing disease or health; but as it is, we cannot know much, and the little we do know we acquire not by comparison to other animals, but by experiment with the bees themselves.

Those two colonies first affected, I took into the kitchen, made a rousing fire, heated the room up to 90°, and had them fly for about 6 hours. Then I examined both and found no queen in the stronger colony; but the weaker pulled through without losing many more bees. The stronger one lived until nearly the end of March; and I then examined the combs and found the two frames in the center almost a solid mass of pollen, having been covered with honey which had been eaten, of course; this honey, as also that in all my colonies, had been gathered from white clover. No fall honey around here; hence fall honey cannot be a cause of the disease as some one seems to believe. The dead colony previously exhibited a most voracious appetite, having consumed all the honey, 24 lbs., and had not reared any brood either, as they had no queen; consequently brood-rearing cannot be a cause, as some one suggests.

In fact, I found in the several colonies that I lost by diarrhœa, only one, which had a patch of brood of about the size of a silver dollar; thus, I think, proving quite conclusively that brood-rearing has nothing to do with it.

It may be, that anything which makes the bees uneasy, may be the first cause or starting-point, in causing the bees to move about too much, instead of clustering quietly; such cases may be queenlessness, lack of ventilation, or rather, a lack of sufficient fresh air, frequent disturbance or jars; all this causes them to eat more than is necessary, partake of pollen also, and the result is overloaded intestines. My lighter colonies wintered best; some came through all right on 6 lbs. of honey, by actual weight.

Youngstown, O.

Utah Convention.

At the late convention held in Tooele City, Utah, the interests of bee culture were represented by the following encouraging reports:

C. Conley, from Box Elder county, stated that there were some 700 colonies in the county, and that about 30 colonies were lost during the winter. He had examined some 500 colonies, and found them in good condition. But little foul brood in the county. Some little chill brood had been discovered. His 50 colonies had wintered well. Last season he took 1,000 pounds of honey.

German Ellsworth, of Payson, said there were over 700 colonies in Payson. Had lost only about 3 per cent.,—wintered on summer stands. He commenced in the spring of 1883, with 30 colonies, 2 of which were queenless. He had increased them to 60 colonies, taken from them 4,000 pounds of honey and 40 pounds of wax. He explained how they successfully managed foul brood for the last 4 years, which, he maintains, is in the honey, and does not attach to the bee. Bees bred in September all die before the following May.

O. B. Huntington, of Springville, stated that they had no organization at that place, where there were several old-fashioned bee keepers, who would not adopt modern methods in bee-culture. He owns 27 colonies, which wintered without loss. Last season he took 1,300 pounds of honey and 79 pounds of wax. He uses the patent extractor, and has sent for a foundation machine. There is foul brood now in the place, which has 427 colonies, averaging 70 pounds of honey to the colony.

Simon Noall, of this city, commenced in the spring of 1883 with one weak colony. He subsequently bought 2 heavy ones. From the 3 he procured 300 pounds of honey. There was some foul brood in his section.

Mr. Welch, from Morgan county, last spring started with 6 colonies, which he increased to 14. Lost one during the winter; took but 300 pounds of honey. There were 72 colonies in the county; some 14 perished during the winter. One man had 30 colonies in old-fashioned bee-gums. He lost a good many. The altitude is great and seasons short. There is no foul brood in the county, and no bee association. He likes the Simplicity hive, and when his bees need food, he feeds them mill dust through a 15-inch tin tube.

John Morgan, of Salt Lake county, believes that the smelter fumes and foul brood caused the great mortality among his own and other apiaries in the county. Last spring he captured a deserting swarm by clodding them. These he increased to 3 colonies. Bees should not be overhauled too early, lest they become chilled. He found great prejudice against honey extractors, which is because of ignorance and in over-using. Bee inspectors are not encouraged by the County courts, who pay them grudgingly.

W. M. Egan, of this city, said he was sorry to learn that there are still some in Utah who stick to the old methods of bee-culture. From 15 to 20 lbs. of honey can be saved to every pound of comb foundation artificially made and introduced into the hive. Each society should take at least one bee-paper, and profit by the experience of others in the East and elsewhere. An experienced expert can cure foul brood, but inexperienced persons should not tamper with it. He strongly recommended the two-story hive. Take honey from the upper story only, and you can readily change frames from one to the other story.

The feeling of the meeting was strongly in favor of organizing bee-societies in every settlement in Utah where bees are kept. A President, Vice-President, Secretary and Treasurer, are all the officers usually considered necessary. The Secretary and Treasurer may be united in the same person. It is hoped the friends of bee-culture everywhere will appreciate the importance of this suggestion and act upon it without delay.

The convention recommended the AMERICAN BEE JOURNAL, published in Chicago at $2 per annum; and *Gleanings in Bee-Culture*, published at Medina, O., $1 a year, as the best papers for bee-keepers.

Messrs. Morgan, Cowley and Ellsworth agreed to prepare an article, each, on the best management of bees for May, June and July respectively.

From written reports received and read, the following are extracts:

Tooele City last fall had 230 colonies; this spring 209 colonies; loss 21. Some of the colonies are weak, but on the whole we have had good success in wintering, considering the severity of the winter. T. W. LEE, *Pres.*
JNO. DUNN, *Sec.*

Manti, about 850 colonies in the county (Sanpete). On the average took about 50 lbs. of honey from each colony. Many of those who wintered on the summer stands sustained heavy loss. Those who used chaff as a protector succeeded well. The interest in apiculture was appreciably on the increase. WM. BRAITHWAIT, *Pres.*
WM. BENCH, *Sec.*

Eli Bell, of Logan, writes: "The bee interests in this county (Cache) are reasonably good this spring. All that I have seen are in good condition. Our method of wintering is to pack the hives in sawdust or shavings and put them under good sheds. We remove the upper frames or honey boxes and put in straw cushions. Last year our yield of honey was very good."

Secretary S. Worthington, of Payson, writes: "The number of colonies of bees in Payson last fall was 738. During the winter lost 25 colonies, or 3½ per cent. of the whole. All were wintered on the summer stands. Total amount of honey taken, 38,158 pounds, and 296 pounds of wax."

A. P. Winsor writes from St. George: "140 colonies; honey yield light; but little wax; wintered on summer stands; no foul brood; but little loss or gain in numbers of colonies. Drouth and frost have contributed largely to the partial failures."

Thirty-five colonies were reported at Santa Clara, near St. George. Wintered well; loss under 2 per cent. No foul brood.

Edward Stevenson, secretary of the Parent Society, but now in Canada, writes: "I can report 50 colonies in good condition, the last I knew of them. Some of them are in two-story chaff hives. Last season I took 60 pounds of honey from each colony at one extraction, without troubling the lower story at all. The lower story has 9 frames; the upper has 14 to 15 frames. The lower hive has 2 inches of chaff under it, and 3 inches at each end, making the upper story 6 inches longer than the under one. The frame of the lower part being lengthwise, will fit the upper one crosswise. In the fall the frames should be taken out of the upper part, and a sack of chaff put into it. I made one of these hives for a friend here, which he values very highly. There are not many bees in Canada, the winters being too severe. But few patent hives are in use."—*Tooele City Daily.*

For the American Bee Journal.

Observations in Cellar Wintering.

C. W. DAYTON.

In colonies first afflicted with diarrhœa I have found but few of the bees with distended bodies, and where they were dead the colony appeared to be free from disease. By close watching, colonies beginning to show the common signs were detected several days before. Either strong or weak colonies which clustered low on the combs were all more or less afflicted with diarrhœa.

I have tried acid and sugar which I believed to check it, but found afterward that it was increased ventilation or settlement of the cluster. Five colonies wintered perfectly on wholly uncapped honey.

I once put 7 colonies whose brood-chambers were covered with wire cloth, in the cellar, alternately with 12 whose brood-chambers were covered with chaff cushions; and after a confinement of 156 days, in a temperature ranging between 32 and 50 degrees, the 12 were found nearly dead with diarrhœa and of the 7, 6 were in good condition, and one weak, without diarrhœa. I have known in several instances voidance of feces to resemble water.

When I moved 60 colonies to their summer stands this spring, after a confinement of 145 days, 11 of the 15 diarrhetic colonies were amongst the 44 having no brood. During the last winter the temperature of my bee-cellar never was below 43°, or above 45½°; and there was a patch of brood in one comb in each of 16 colonies when set out.

In the winter of 1882-3 the temperature varied from 32° to 50° and there was brood in from one to three combs in every live colony. I have known several colonies in deep hives, in a warm cellar, and clustered low on the combs, to keep dry and quiet from 50 to 100 days, when the accumulation of moisture on the combs or material about the brood-chamber, became visible, without the aid of brood-rearing; and the honey being consumed near the cluster, to cause a move of the cluster which was generally followed, but sometimes preceded, by the very sudden appearance of distended bees which remained in the cluster, unless so exhausted as to exhibit their well known conduct; and in the spring the hive and combs near the cluster were found to be dry, and a part of the remaining bees found with distended bodies and the cause of diarrhœa (unless it should be found to be pollen) disappeared.

Since examining, without injurious disturbance, 30 colonies twice each day, on more than one hundred days during one winter, and also 50 diarrhetic colonies in the spring, I believe there is but little to be learned from the tracks of the disease.

While successfully wintering a reasonable number of colonies with the right upward ventilation, and a like number supposed to be hermetically sealed above, I have found that a medium preparation has fixed the price of my experimenting.

My experiments thus far have been made with natural stores gathered before July 25; and my idea is that 10 colonies in a diarrhetic test are better than a larger number.

Bradford, Iowa.

For the American Bee Journal.

Des Moines Co., Iowa, Convention.

The Des Moines County Bee-Keepers' Association, held its last session at Middletown, Iowa, on April 22, 1884. The meeting was called to order by the President, Geo. Bischoff.

The committee appointed to wait upon the Agricultural Society reported that the following premiums would be offered at the Fair next fall.

Best display of Italian bees	$8.00
Best display of black bees	5.00
Best imported Queen	3.00
Best display of comb honey, not less than 25 lbs	5.00
Best crate of honey, not less than 25 lbs	3.00
Best hive for all purposes, best honey extractor, best wax-extractor, best bee-smoker, and the best bee-veil	Diplomas
Best display of apiarian implements	Dip. and $5
2d best display of apiarian implements	Dip. and $3

NOTE.—All hives must be securely closed while on exhibition, and no bees allowed at large.

The foregoing report was adopted, and hearty thanks expressed to the Agricultural Society.

Nine names were added to the list of membership; 16 members represented 564 colonies, fall count; spring count, 491. The subject of wintering bees was then discussed.

Henry Breder winters them in a cellar, and uses the Langstroth hive. Adjourned.

After dinner the same subject was continued.

Jno. Nau winters them in an arched cellar, with sufficient ventilation to keep the temperature ranging from 40° to 46°. A. M. Baldwin, on their summer stands without any protection. W. R. Glandon, in an old ice-house. F. F. Melcher, on their summer stands with straw packed on the sides and back, and in the cap of the hive. Others in his neighborhood packed in the same way, but lost heavily. A. Zackmeyer, on their summer stands and in the cellar, with canvas on the top, and straw in the cap of the hive; 2 colonies he left without any protection, and both were lost.

"Handling and Transferring" was next discussed. Henry Smith gave a practical explanation of his method. Messrs. Bell, Bischoff, Smith and others discussed "Spring Management of Bees."

The following resolutions were adopted:

Resolved, That we meet on Sept. 17, 1884, at 10 a. m., on the Des Moines Co. Fair Grounds, for the exhibition of honey and apiarian implements and supplies.

Resolved, That we hold our next annual meeting at Burlington, Iowa, on the 4th Tuesday in April, 1885, at 10 a. m. sharp.

Uniform prices for honey was considered very desirable.

The Italian bees were most favored, but hybrids were considered the best workers. Queen-rearing was briefly discussed by many of the members. The next subject that received special attention was "Natural Swarming" vs. Dividing. The latter method was not approved except for rapid increase; but nearly all expressed themselves as believing that natural swarming is the most preferable.

Adjourned to meet Sept. 17, 1884.

JOHN NAU, *Sec.*
GEO. BISCHOFF, *Pres.*

For the American Bee Journal.

Southern Wisconsin Convention.

The Convention met at Janesville, Wis., May 6, and was called to order by Pres. C. O. Shannon, who briefly stated the object of the Association.

After the reading of the minutes of the previous session, and the constitution and by-laws, new names were added to the roll.

The exhibit of apiarian implements was not as large as expected. The discussion was of a miscellaneous kind. Questions which seemed most imperative were discussed.

Wintering was briefly considered, some preferring the cellar, if dry, with the honey-board moved forward ¼ inch; others choosing to winter on the summer stands, packed in chaff. The great advantage of this is in allowing them to remain in winter quarters until cold nights are past. The losses in wintering will probably not exceed 5 per cent.

Supers were discussed at some length. Those most in favor were 1 and 2-lb. sections in frames.

How to use comb foundation to the best advantage, wiring in frames, etc., was well agitated.

A discussion among a few, during recess, on the relative size of the different kinds of bees, resulted in the conclusion that, since the cells are the same size, there can be no material difference in the size of bees, except as the cells become smaller with age.

The next meeting of the Association will be held in Janesville, Wis., Sept. 23, 1884. J. T. POMEROY, *Sec.*

For the American Bee Journal.

Wide Frames vs. Cases.

W. H. SHIRLEY.

On page 198 Mr. Burrell gives his experience with cases and separators. I endorse all of his article except where he says, "I will not use wide frames. They are an abomination."

I can hardly agree with him there. I have never used any case-method in my own apiary yet. I have produced comb honey 2 years without separators. In the spring of 1883 I determined to run about ½ of my apiary for comb honey, put up in those naughty ½ lb. sections, and the other ½ for comb honey, put up on the old plan, in 2 lb. sections.

I used the clamp-method that Mr. Heddon has described in the BEE JOURNAL, for the 2-lb. sections. For the ½-pound sections I procured 150 supers, each holding 6 one-story wide-frames with wooden separators, and I kept looking, all through the season, for the wide frames to prove "an abomination"; but they did not. I much prefer the one-story wide-frame system to any case-method I have ever yet seen. My reasons are these:

1. Wide frames keep the sections nice and clean all through the season, and when you crate them, it is not one half the work to clean them for market, and when cleaned, they are not stained as sections are where they come in contact with the bees, as they do with the case-method.

2. Often I have gone to a hive and found the sections in the middle wide-frame nearly full of honey and the outside ones hardly touched. All I had to do was to slip out my wedges, put the outside wide-frame into the middle of the case, and in a few days there would be a nice case of finished sections. The foregoing manipulation is more than the case-method will let you do.

3. When one wishes to use the same sections, 7 to the foot, or 1¾ inches without separators, all you have to do is, to put them into the wide frame with the separators out, clamp them tightly together, and you have a case that goes far ahead of Mr. Burrell's. I have seen one of Mr. Burrell's cases, so I am not speaking at random.

By using my wide-frame case-method, I am able to use the 1-lb. sections or the ½-lb. without extra cost, as either size will fit into the wide frames.

It is a fact among bee-keepers, as in all other branches of trade, that he who invents certain things or adopts certain methods and becomes wedded to them knows best how to manipulate them. With me, Mr. Burrell's case would be too much of a complication; too many loose sticks and boards to look after; and in the make up of it, iron as well as wood has to be used, which adds to the weight, cost, etc. It also destroys the bee-space above the frames, and between the cases when tiered up, which I consider is of vital importance.

I procured my one-story wide-frame supers of Mr. Heddon, who used them in equal numbers with his cases; and while he and his students prefer the case, I prefer the shallow wide-frames, though I have never tested the case-method the season through.

I am sure I should prefer Mr. H.'s case without separators, to Mr. Burrell's with them. Mr. Heddon agrees with me that of all the plans for the use of separators, he prefers this neat little one story wide-frame super; and also, that he does not consider his case any better than the super for all persons in all locations.

With 8 sections to the foot, or 1½ inch sections, I am inclined to think 95 per cent. of them would be perfect, where full sheets of foundation are used without separators. Of course the wide frame if used would have to be made narrow to correspond with the sections.

But why dispense with separators when by their use the honey is all built nice and perfect? I am satisfied that I can get as much honey stored in sections *with* separators as *without* them; for last year I tried quite a number of wide frames filled with sections, which when finished weighed only 4 ounces; and the bees finished them just as quickly as any other size. All things being equal, I think it makes but little difference with the amount of honey stored, with separators or without; but all things considered I can say from my experience, "give me separators."

Glenwood, Mich., May 2, 1884.

For the American Bee Journal.

Western Bee-Keepers' Association.

The fourth semi-annual meeting of the Western Bee-Keepers' Association was held in the Court House at Independence, Mo., April 24.

At 2 o'clock, owing to the unavoidable absence of the President, the meeting was called to order by the Vice-President, Dr. G. W. Young.

The minutes of the previous meeting were read and approved. The committee on "Marketing Honey," reported that they had visited Kansas City and that with only one exception all the leading honey-dealers preferred their honey unglassed. The committee recommended unglassed honey in 1-lb. sections, in crates of from 12 to 20 lbs. each.

On motion a committee of three was appointed to prepare a list of subjects for discussion.

Mr. P. Baldwin in an able manner addressed the convention in regard to preparing honey in the finest possible condition for market.

The first question discussed was: "What is the best spring management to bring bees up to proper working condition in season for the honey harvest?"

B. Baldwin: My opinion is that all that is required is to see that the bees have plenty of stores ahead, so that they never will be short, and let them alone. I have tried tucking them with blankets, closing down on two or three frames, carrying them in and out of the cellar every cold spell, and with no better results than with present management.

J. H. Jones: Weak colonies must be cared for. I am strongly in favor of blanketing and closing down to four or five frames early in the spring.

A. A. Baldwin: I think all that is needed in the spring is to see that the bees have plenty of stores within reach of the cluster at all times; and then leave them alone, and they will prepare themselves for summer work. The bees that I moved from New York last fall were wintered in the cellar. When spring came I tucked all but 4 with blankets. Those which I left alone are as far advanced as the others. I have had 4 of those first mentioned swarm out and desert the hive. I would repeat that plenty of stores close to the cluster and brood, is about all the spring management bees require.

L. W. Baldwin: I think a weak colony is better off closed down to two or three frames. Do not be in a hurry to spread them out. Wait till they are crowded before giving more room.

P. Baldwin: I believe that a colony which has been wintered on the summer stand will be more gritty, and will build up quicker and get strong, and ready for the honey harvest sooner than one wintered in the cellar. I advocate uniting all weak colonies.

Mr. J. F. Myers, of Wyandotte, Kas.: I believe in putting on quilts and keeping the bees shut down close. Do not give them any more space than they can occupy. I think it better to build up all the weak colonies. I often find them as profitable for honey as some that are strong in early spring.

A. A. Baldwin: I do not double them up till later in the spring. Wait till they are gaining fast in numbers then select the best queen, kill the other, put two together, and then they will go ahead and make a strong colony that will pay better than the two which are weak.

J. D. Meador: My experience is that it pays better at the end of the season to build up all weak colonies. I think I make more in that way than I would by uniting them. I am satisfied that a large amount of the fussing and fooling done with bees in the spring is unnecessary. The main thing is a close hive and plenty of stores that the bees can get at in all weather.

The next subject was, "What is the best management to prevent too much swarming."

A. A. Baldwin: My plan is: wait until the colony is nearly ready to swarm, then take away the old queen and either kill her, or give her about a quart of bees, and frames of foundation. If you desire increase, that would be the best way to get it. Then give the colony a cell and let them rear a young queen. They seldom swarm with a young queen.

J. F. Myers: Plenty of room will prevent swarming, in a great measure. It cannot entirely be prevented.

P. Baldwin: I have tried Doolittle's plan and it failed. Bees in New York are not like western bees; ours have broader views; are more like the inhabitants; have more enterprise and go-aheaditiveness. My method to prevent too much increase is, to let the colonies all swarm once; put two or three swarms into one hive, and put on all the sections they can occupy. I cannot prevent swarming, but I can prevent too much increase.

The next question was, "Which is the better method of increase, dividing or swarming?"

L. W. Baldwin: I am strongly opposed to dividing. It is strictly opposed to nature. A colony of bees knows better than we when it is ready to swarm. A colony left to swarm naturally will begin to build comb 3 or 4 days sooner than one which is made by dividing. Then another strong argument against it is: A man will double up his bees and if from any cause the flow of honey should cease, he would be left with all his bees, or a great many of them, in a starving condition.

J. W. Hart: I do not believe that one can become well enough skilled so as to know just when to divide a colony, and have it go ahead like one that chooses its own time and gets ready in its own way. I have tried both methods and have come to the conclusion that the best way is to let nature take its course.

P. Baldwin: I have tried all the new theories that have been advanced. I am strongly in favor of natural swarming.

J. F. Myers: I am an advocate of dividing. It is the only safe way of guarding against swarms going to the woods. I start nuclei early in the season and rear queens to give the old colony; for it will swarm and become so light in bees, that, at times, I would have to strengthen it.

A vote was taken on the question which resulted in a majority of 4 to 1 in favor of natural swarming.

"Which is the best plan of rearing queens?"

Jas. A. Nelson: I think queens reared in good nuclei, are in every respect equal to those reared in full colonies. Those queens reared early in the season, or late in the fall, may not be so good.

J. C. Batch: I am satisfied that queens reared in nuclei are superior, or at least ought to be, to others; for you have a chance to rear from the best colonies.

A. A. Baldwin: I am satisfied that a queen is far better reared in a full colony with the natural impulse of swarming, than one reared in a small nucleus. I have bought a great many forced queens, or queens not reared under the swarming impulse, and never had one to live more than 6 months. I would rather pay $3 for a queen reared naturally than $1 for a forced queen.

P. Baldwin: I think a queen reared in a capped cell taken from a full colony is as good as any, no matter where reared or hatched.

J. W. Hart: I know that a queen reared from a cell that was capped in a full colony, is just as good, if reared in a small nucleus, as if it had been left to hatch in the parent colony.

J. H. Jones made a strong argument in favor of queens reared naturally.

A. A. Baldwin: I have always noticed that a cell produced in a full colony has plenty of food left in the base of it; while a cell produced in a nucleus is generally left without any.

Adjourned till 7:30 p. m.

At 7:30 the meeting was called to order by Vice-President Young. The Secretary was ordered to have 500 copies of the constitution and by-laws printed and distributed. A motion was carried that the President appoint two committees on the fall meeting of the association.

The convention then took up the question of the relative profit of producing comb and extracted honey.

Mr. P. Baldwin said that he had always produced comb honey, and of course he knew but little of the relative profits of the two.

L. W. Baldwin: I extracted 2,000 to 4,000 lbs. each year and am strongly in favor of comb honey for profit and quick sales. When my comb honey is all sold I have the most of the extracted on hand. That has been my experience, and I am bothered to sell the extracted. I think more bees die from the use of the extractor than from any other cause. Bee-keepers will extract late and the consequence is, bees go into winter quarters with unsealed honey, it sours and causes disease, when if sealed stores had been left them to winter on, they would have done well.

J. H. Jones: I am of the same opinion as Mr. Baldwin. I think of giving away my extractor. I think it would be money in my pocket to never use one again.

Dr. J. G. Meador: I produce extracted honey exclusively; have no trouble to sell it. I can dispose of the extracted as soon as I could the same amount of comb honey. The most of my customers would rather have it, at the same price. I believe I can get 3 pounds of extracted to one of comb.

W. B. Thorne: I have found it more profitable to produce extracted honey. It is easier handled, less trouble to store it, and quick sales. I could always sell my extracted honey as fast as the comb. The most of my customers take the extracted in preference to comb honey if put up in glass. I think that is the only way to put up honey to sell direct to the consumer.

E. J. Baxter, of Nauvoo, Ill., said that he had handled a large amount of both comb and extracted honey, and that there was more money in the extracted. A good colony will produce three times as much extracted as comb honey, in 2-lb. sections. Last year he produced 2,100 lbs. and had no trouble to sell it.

J. W. Hart: I think that the best results can not be obtained from either one by itself, but recommend that a bee-keeper must produce both in order to make a success of the business.

Adjourned till Friday morning 9:30 a. m.

The convention was called to order at 9:30 a. m. by the Vice-President.

The first question: "Is the traffic in the dollar-queens any benefit to the bee-business?"

P. Baldwin: I do not use dollar-queens, and I am not in favor of the traffic.

L. W. Baldwin: I do not handle dollar-queens, but I am satisfied that it is an injury to the bee-business. I know that good queens cannot be reared and sold for one dollar. A great many ship old and inferior queens to their dollar-customers and keep the best for better prices.

J. A. Nelson: I think that as good queens are sent out by the dollar-queen breeders as those sent out as tested. I take as much pains in breeding as others, and my queens are as long lived. There are irresponsible queen-breeders, as well as in any other business. I have had better queens that I bought for $1. than many I have paid $3 for.

A. A. Baldwin: I have bought a great many dollar-queens and never had one to live over 6 months. A great many of them were nothing but dwarfs. Some never laid an egg after being introduced.

J. C. Batch: I have bought dollar-queens with good results; they lived as long as any, and I am well pleased with them.

W. B. Thorne: I have bought several dollar-queens and have been in every instance, well pleased.

P. Baldwin: I have always observed that the most of those who bought dollar-queens were not experienced bee-keepers, but beginners who want something cheap, and consequently the breeders should be very careful what they send out.

J. A. Nelson: I have noticed that a great many beginners buy dollar-queens of me, but they generally buy more the next year and often send for tested queens. I have customers who have bought queens for 8 years, by the dozen. They say they can buy them cheaper than they can rear them in their own apiary.

The next question was, "What is the best method of wintering bees?"

E. J. Baxter: I winter them on summer stands in a double-walled hive; have 8 frames in the hive, pack one side with leaves, put a mat of grass 1 inch thick on the top of the frames, then fill the cap with chaff and tack on a piece of oiled muslin to keep the leaves in. I leave the front entrance open, make sure that they have plenty of sealed stores within reach of the cluster, and leave in plenty of honey to last them till the first of May. The past two winters I have lost less than 2 per cent. I much prefer this mode of wintering to putting them into a cellar.

A. A. Baldwin: I am very much in favor of a double-walled hive with side and top-packing, for out-door wintering. I think that is the best way a colony can be wintered; and it will build up in less time in the spring than one wintered in the cellar.

P. Baldwin: I am in favor of a single-walled hive for out-door wintering, with the cap packed with chaff to absorb moisture. I think I can winter more successfully on the summer stands in this climate.

J. F. Myers: I winter my bees in the cellar, with less loss and a great saving of honey. Last fall I put 88 colonies in and took out 87 this spring in good condition.

L. W. Baldwin: I have been in the business 16 years, and have always wintered my bees in the cellar when I could. It saves a large amount of honey and I find it less trouble to carry in and out of the cellar than to pack them for out-door wintering. And it saves the expense of mats and quilts.

J. W. Hart: I have wintered bees on the summer stands, and in the cellar, with about equal success; but I prefer the cellar, for I save from 8 to 10 lbs. of honey to the colony.

J. D. Meador: I prefer a cellar to winter in, if I have one that is suitable; but if it is not dry and so fixed that the air can be kept pure, the bees had better be left on the summer stands.

Adjourned till 1:30 p. m.

At 1:30, after calling the meeting to order, the President introduced Mr. Jerome Twichell, of Kansas City, Mo., who addressed the convention in a very able manner on the subject of marketing honey. Mr. Twichell showed the convention that he was master of the situation, and well up with the times in regard to the best manner of packing and shipping honey. There has been sold in Kansas City, the past season, 70,000 lbs. in 2-lb. sections, 4-5 of which was glassed; 13,000 in 1-lb. sections, 2,000 of it glassed; and about 6,000 lbs. of comb honey; in irregular shapes, about 18,000 or 20,000 lbs. The honey from New York was mostly in 2-lb. sections glassed. The extracted was nearly all from California, Iowa, and Illinois.

He says: I have received comb honey from New York City in good shape. It came by freight. I consider Kansas City one of the best of honey markets. There is no danger of overstocking the market. I have a large trade in Colorado and New Mexico, and have shipped there with very satisfactory results. For the home trade I prefer honey unglassed; but for shipping a long distance I strongly favor glassing it My advice to bee-keepers is not to use dovetailed sections. I have found on arrival 90 per cent. of the broken combs of honey in dovetailed sections. I do not think ½-lb. sections would pay. I have had but little shipped to me this year. The bulk of the extracted honey, I have sold for manufacturing purposes. The cry of adulteration deters many of my customers from dealing in it. All dark extracted honey should be shipped in large packages, for the manufacturers prefer it in that shape. The average price in Kansas City this season was: No. 1, comb, 17½ cents; irregular box-honey, 14 cts.; extracted, No. 1, 9¼ cts., No. 2, 8¼ cts.

Independence, Mo., was selected as the place of next meeting; the time to be fixed by the executive committee. The following was adopted:

Resolved, That the Western Bee-keepers' Association extend a vote of thanks to Mr. J. Twichell for his able and instructive address.

The query-box was opened at this time.

The report of the committee on statistics is summed up thus: 23 members represented 1,938 colonies · fall count; 1,609, spring count.—loss 329 colonies.

A large number of very prominent bee-keepers from abroad were in attendance.

Adjourned to meet at Independence, Mo., upon call of the Executive Committee.

C. M. Crandall, *Sec.*
Dr. G. W. Young, *Vice-Pres.*

For the American Bee Journal.

The Production of Drones.

D. K. BOUTELLE.

On page 594 of the Bee Journal for 1883, Mr. Thielmann refers to the statements of Messrs. Youngman and Trussell, in the Northern Michigan Convention (page 542 of the Bee Journal for 1883,) that they have had queens, drones, and worker bees, all from the same larvæ. He then relates an experience of his own, from which he seems disposed to conclude that queens, drones and workers may be reared from eggs laid in worker cells.

On page 568 of the Bee Journal for 1880, may be seen an article from me relative to this same subject, giving an account of my experience in 1878. It seemed to be so much at variance with the Dzierzon theory, and all popular writers upon bees, that I did not venture to offer it for publication until I experimented more. This I did in the two following years; and, by these experiments and my former one, I became fully convinced that there is no difference in the eggs from which the three classes of bees are produced; but that different treatment and conditions cause the different effects.

I did not then venture, seemingly against all the bee-world, to express this conviction very strongly, but simply gave my experience, hoping to draw out others and more experienced bee-keepers on the subject; but it seemed to attract no attention, and I concluded I had made a laughing-stock of myself among bee-keepers, and that I would better have kept still. So, when the "parthenogenesis" discussion came round, I shrugged my shoulders and kept quiet; but I thought it was all *no genesis*.

But finally Dr. A. B. Mason, in the *Bee-Keepers' Instructor*, makes allusion to my article, and the Bee Journal of 1882 quotes from him on page 37. The Doctor, after quoting from my article, pays me the following compliment: "The experience that this correspondent gives, is worth more than all the theories of learned and experienced apiculturists." While of course I am thankful to the Doctor for his compliment, if he means it, yet, it seems to me like the boy's "boo," that made the colt run away with his father; entirely "too big a boo for such a little colt."

Let us think a little more about this subject, sex in bees. It seems to me one worth investigating; and, after all, what is there so very incredible in the idea that the different sexes of bees should be developed from the same kind of eggs?

What absurdity is there in the supposition that different conditions, different surroundings, different treatment, and different influences produce the difference of sex? No doubt there is a natural and adequate cause for this effect; but we possess very little, if any, definite knowledge as to what the immediate cause is.

So far as we know, in all animated nature, except bees and a few other insects, every individual, male or female, requires both a father and a mother in order to gain an individual existence.

After understanding this great general law, is it not more incredible, more irrational, seemingly more absurd that these insects are an exception to the law? Do not both male and female chicks hatch from the same kind of eggs?

Aye, is not this also true of the ova of all known animals? To me, it does not seem rational that the bee should be an exception to this great law, that requires both male and female to reproduce their kind.

But, says one, "if this be so, then what becomes of parthenogenesis which the great bee-scholars of Germany have so ably defended; can we ignore what these great men have verified?" And farther, "do we not see that eggs laid by unmated queens always produce drones?" So too, I would answer, a few hundred years ago everybody could see that the earth was flat, and that it was the center of the universe; the sun, moon and stars all revolving around it every day; and the learned astronomers had verified these facts. Now, I am unable to account for the at-present-seeming-fact that virgin queens lay eggs that produce drones; but it does not therefore follow that it cannot be done.

When Copernicus published his theory of the solar system, and was summoned before the authorities, he was told that if his theory was true, the planet Venus ought to show phases like the moon. He thought and answered, "yes, it ought; I had not thought of that before. I cannot explain it, but I believe it will be explained."

A little later, when Galileo constructed his telescope and looked through it at Venus, there she was a half moon. So too, I have faith enough in *law* and *science* to believe that it will yet be demonstrated that all reproduction of kind comes under one law, and that parthenogenesis is a myth like the Ptolemaic system of astronomy, a chimera like the fabled Centaur—a monster of imagination.

Let us hear from others. I like the way Mr. Heddon treats most questions; he is a great skeptic; he doubts or has doubted nearly all that has ever been said or written of bees. He doubts and then goes for investigation to either verify or prove the falsity of the hypothesis, which have been assumed. Doubt is the harbinger of knowledge; and then he owns up so candidly when he finds he learns his mistakes, and never calls his opponents fools or knaves, because they disagree with him.

Lake City, Minn.

For the American Bee Journal.

Surplus Receptacles.

JOHN LONGMATE.

I have been very much interested in the articles on the subject of surplus receptacles, and have made some experiments, with a view of ascertaining the best method of producing surplus comb honey.

I have tried side-storing in boxes and in frames, the same as the brood frames, and in sections with and without brood frames; also top-storing in the various modes, endeavoring to find the best and most practical method of storing honey, in the best marketable condition.

I consider it settled beyond controversy, that the best form in which to have it, either for home market or for shipment, is in sections not to exceed 2 lbs. in weight, and these should be well filled and smoothly capped, in such a manner that when packed, the honey does not touch the sides of the case, nor any portion of any other section, so as to chafe the cappings and cause leakage.

After long experimenting, I hit on the plan of broad frames of the same form and size as the brood frames. These I could use in the side next to the brood combs, and by placing a hive just like the lower one on top of it, use them as an upper story; placing them all on at once, or by the use of division-boards and cushions on the brood frames, commence with a few and increase as needed.

When I had this plan perfected in my mind, and adapted to the size of the hive I said, "I have it"; and thought, "now that is perfect. That is splendid. I shall have no more trouble with bulged combs, or waxed sections, for the outside of the sections will all be protected by the brood frames, and the thin wood separator tacked to the side of the frame will compel the bees to build all the combs straight, and not bulge them beyond the edges of the sections."

So in the winter I made a lot of broad frames, and tacked on the wooden separators and had them ready for the honey flow. When the time came I put them into the hives, and with eager expectation watched the result. It soon became time to take them out, and great was my disappointment. While some of them were as nice as I could wish for, many of the combs were built crosswise and attached to the division-boards, or to the separators on each side, and could not be removed without first cutting loose from the separators of the adjoining frame.

And then came the difficulty of getting the bees from between the combs and separators, and of removing the sections from the frames, for the bees glued them to each other and to the frames.

The edges of the sections were as much daubed and discolored as those where the bees were allowed to run over the whole outside. It is the edge of the section which we wish to keep clean and white, for they are the parts exposed to view, when packed in cases.

If I were satisfied that there is no better way, I could endure these vexations, thinking they were a part of the business, and must be endured; for by "the sweat of the brow" and the sting of bees we shall eat honey.

I find I have not the number of the BEE JOURNAL containing Mr. Heddon's description of his honey-board; but I can see very little benefit derived from the use of a honey-board. I think the best way to place sections on a hive, is to take two strips of wood 1½ inches wide, and ¼ inch thick, and as long as the inside of the hive, or enough to take in as many sections as you wish to set side by side; take 2 strips of the same width, ⅜ inch thick and ⅛ inch longer than the sections, nail the long strips to the ends of the short ones, and you have a case in which to set the sections. Place this crosswise on the brood frames on the back side of the hive. On the inside of this, along each side, place a strip 5-16 of an inch thick, ½ inch wide, and as long as the case. Now place the sections in this case, resting them on the strips, close the ends with wood separators and key them tight with pieces the same as the top of the section. Two of these cases of sections cover the brood frames, and when more are needed, lift them up and place empty ones under.

This is, in my mind, the simplest, cheapest, and most readily manipulated case I have ever seen or heard of. Any one section, or the whole case, can be removed and returned with perfect ease.

The top and bottoms of the sections are ¼ or ⅜ inch narrower than the sides, leaving room for the ingress of the bees, and a good opportunity to see the condition of the combs, by simply laying back the cloth a little. The 5-16 inch strip between the sections and frames, admits of the passage of the bees between them, and where they are properly put on, the bees do not wax them as much as in broad frames.

Three-eighths of an inch is too much space. The bees will sometimes bridge up between, and ¼ inch is not quite enough. They sometimes wax them fast.

In putting the sections on I find it best to place the case on first, then the narrow strips, and then the sections one at a time. In this way I kill no bees and when one gets a little used to it, they can be put on very quickly.

I have been using sections 1⅞ inches wide, with separators, and thought separators indispensable; but since reading Dr. Tinker's article on page 545, and considering the idea of sections occupying the same space as the brood combs, and continuous passageways up into the sections, I have concluded to try it this summer, and have made sections with sides 1½ inch wide, and top and bottom 1⅛ inch. These I can use on my present rack, and if I can obtain all, or nearly all straight and smooth combs without separators, I shall consider that a very great advance has been made in scientific apiculture.

There is one point upon which I wish our practical bee-men would throw the light of their experience. The division-board, I consider an almost indispensable article in the apiary, but I experience some difficulty in preventing the bees sealing the ends to the sides of the hives. I have tried cutting the boards ¼ inch shorter than the width of the hive, and tacking strips of woolen cloth on each end, to fill the space. I have tried glazed cloth, put on in such a manner as to form a half-circle tube, between the end of the board and the hive. This last I consider the best for the end of the board.

Then to make it easy to remove the boards, I cut them in the center, or make them of two pieces, and hinge them with small staples. Then to remove the board, push the center from the comb. This shortens it and it is easily taken out or moved back. If any of our bee-men have a better way, will they please describe it in the BEE JOURNAL?

Farmer City, Ill.

For the American Bee Journal.

"Who Should Keep Bees?"

JOHN YODER.

So much has been said and written about the art of bee-keeping, that the novice may say, "I can never learn"; and yet the "half was never told," and that which has been told should never have been told.

Too much is said on the bright side of the bee-business; it makes the hundred resolve to "embark" when only one will succeed. It is very nice to visit a practical bee-man and see him handle his bees, taking off 20 or 30 lbs. of pure honey per colony; yes, so the 99 resolve to get "just a few for our own use." They do so and the few gather perhaps 20 or 30 lbs. of honey during the summer and then their bees die from the carelessness or malpractice of their keeper. No one should attempt to keep bees unless he knows "what manner of man he is"; if every man before starting in the business would first commit to memory W. F. Clarke's paper, "Who should keep bees," read at the Toronto Convention, and ask himself, am I naturally qualified? if so, can I attend to it? and then give an honest answer and act accordingly; if every one would do that, I am sure there would not be so many *bee-killers*.

It is really surprising how many there are who undertake, and do keep bees without having one book or paper on the subject; or who do not read an article in a whole year, unless they borrow or hear a short lecture while on a visit to some live bee-man.

This is the advice I gave to a bee-man the other day when talking to him about his bees: "If you want to make them pay you a handsome profit and do not wish to take from them what honey they have, or do not desire to sell them, set them out from under that old shed, pile those old rails on them and set fire to them." Now I know that was good advice under the circumstances; and there are very many more who might "go and do likewise". What I mean is this: There is lots of honey wasted by every body who keep bees, to their own loss and the loss of the *one* practical man. However, this is a free country. A locality can be easily so overstocked that very little honey will come on the market.

Now as to spreading a knowledge of bee-keeping by getting subscribers to the BEE JOURNAL (and I know no better way of doing it), I can say, it is not beneficial to me; though I have tried it, talked it up, and lent my paper for miles around, and never took a subscription. You see if all my bee-keeping neighbors would get enthusiastic on the subject (and no one should keep bees unless they do) it would be bad for me; but Darwin says, "The fittest will survive." In this village I am almost "monarch of all I survey"; but in a village 6 miles from here, there is at least 6 enthusiasts that are going to make a specialty of the business, and run it into the ground. Now you may think me selfish, but there is something not right; perhaps that something is myself.

I have wintered my bees for two winters in the cellar, very successfully; and 22 colonies consuming, on an average, in 158 days last winter, a little less than 9 lbs. of honey; or rather they lost in weight less than 9 lbs. including the dead bees. All of them soiled the outside entrances of the hives; some of them so badly that I really was afraid they would die.

On April 2, I set out 7 colonies for a fly; they spotted everything within reach, so I set them back the same evening. On the 14th I set them all out; they did not spot anything. How was that? And most of the hives were very clean inside; while bees wintered on summer stands were very much soiled inside. I think when bees are in a warm, dark place they will come out to void themselves. In the cellar I pile the hives 3 deep, the first resting on an empty hive, a cushion made of oat-hulls over the frames of each, and let the cross pieces of the bottom board span the hive below, resting on a slat nailed on the end of the hive ½ inch below the top.

I have 53 colonies with those cushions on most of them. The bees cluster immediately under the cushion; but those without the cushion cluster lower down, thus showing that the cushion is warm and agreeable to them. Spring dwindling is what I fear most, although I have not had much trouble in that way. I use the large hanging, 8-frame Quinby hive.

How would heavy pasteboard do for division boards? When a colony is strong enough in the spring to cover only 5 or 6 frames I think such a board would be just thing. Let the board fit tight all around. Some use a hanging-board the same size as the frames; but I do not see that they would be any better than an empty comb, or a full one either.

Here is a recipe for the prevention of bees' stinging, as told me by an old Irishman. He said there was a gentleman in the old country who kept 40 or 50 colonies, and before going to handle his bees he would first make a soap lather on a hog's back and smear his arms, hands, neck, and face with it. The bees would not sting him for a week, unless he washed himself; for a bee would not sting a hog or any thing that smelled like one. Try it.

Springfield, Ont.

For the American Bee Journal.

Bee-Feeding in the Spring.

W. A. SHEWMAN.

In all the bee-periodicals one reads much on the subject of feeding in the spring; and it well pays all who are engaged in keeping bees, as very many new ideas are brought forth, which a careful reader and sound reasoner may turn to advantage and profit. The success of the season, in a great measure, depends on the success of spring management; and in that there are many different theories.

To an apiarist of experience, or to those having a large number of colonies, the articles published in the bee-papers are more especially directed; and the amateur or the possessor of a dozen colonies hardly finds in them the intelligence just suited to his case in order to make matters the most practicable. Experience is a valuable teacher, but practicability must go hand in hand with it, in order to be successful. With me success is to succeed with the least expense and labor—reasonably so.

But spring feeding is my theme, and I am on the amateur side. I read various ways of feeding, but the many different feeders advertised, are unavailable, so I use a method of my own, which I find is successful.

No doubt Messrs. Heddon, Doolittle, Hutchinson, etc., will smile audibly; but it will contrast with the "old fogies" who "pooh" at their fancy methods. When I first examined my colonies in March, I found them all as strong, apparently, as when packed, in the fall, and as bright as a new silver dollar; but some had very little honey. How to supply it, was a question, as my time was limited. So I procured several small wooden boxes, that would set in between the inner hive and the packing case. In the side of these boxes near the top a slot was cut some 6 inches in length and ½ inch wide. The boxes were found to leak when tried with water, but a hot iron and a very small quantity of beeswax soon soldered the joints on the inside and they were made water tight. These boxes were put next to the inner hive, the slot even with the top of the hive; a small piece of wood was inserted into the middle of the slot and projected about two inches; the cloth cover over the brood-frames raised enough to admit the small piece of wood; this makes a passage-way for the bees to the box,—and they readily find it. Then slide the cover of the small box 2 or 3 inches and pour in syrup, filling up to the slot; close the cover and the bees are fed without the least disturbance. At any time, more syrup may be given and the bees will never know how it came there.

The cheapness of this method and its practicability for those who have few, or many colonies, is admirable. One great point I claim over using a feeder inserted into the body of the hive, is, that with my method the bees are undisturbed, while with the others they are shifted about and more or less irritated; and the less you disturb the natural condition of bees in the spring, or any other time, in my opinion, the better it is.

Now as to the feed. I know that granulated sugar syrup is the next best thing to the natural honey for bee-food. And in my business I use it for spring feeding in the proportion of 7 lbs. of water to 10 lbs. of sugar. For fall feeding I should use 1 lb. less of water.

The syrup is boiled for a moment or two, then skimmed, and allowed to cool so that only the chill is off before feeding. I have wintered bees at a cost of one dollar per colony, solely on sugar syrup.

I will briefly state a few pointers: I do not believe in feeding often in the spring to stimulate breeding. If feed is required give all that is necessary at one time, and the breeding will proceed faster than if interrupted every few days. Neither do I believe in the pollen theory as the cause of diarrhœa, or the loss of bees. In some future article I wish to give my views on that question; but space forbids here, and more, it is not a timely topic. There is no use now, of telling how to pack bees for winter, etc.

Randolph, N. Y.

For the American Bee Journal.

Protection of Bees in Winter.

R. M. ARGO.

The best plan for the protection of bees in winter has not, as yet, been settled; and as the subject is still discussed quite extensively, I will give some plain facts on the natural method of wintering bees.

All recollect the severe winter of 1880-81, and the great mortality of bees which followed it. The theory then was that the extreme cold and long çonfinement killed the bees. I have for some time doubted this theory, and am now satisfied of its fallacy.

I generally have been successful in wintering bees for the past 20 years. The winter of 1868-69 will be remembered as one of great mortality among the bees, especially here in Kentucky. The disease was termed bee-cholera. Nearly every colony in this vicinity died; and all that saved my 13 was the feed I gave them before preparing them for winter. I believe it was not starvation that caused the death of the bees, but poor honey.

The past winter was the coldest ever known in this State; the thermometer, at times, being 33° below zero. My bees were confined longer than ever before, and still they came through stronger than I could have hoped for, and that without the loss of a single colony.

I had moved my apiary of 43 colonies, to a location which is high, well drained, and much exposed. They were moved on a spring-wagon, and put on the ground in a semi-circular row facing the south. I intended fixing them up for winter and putting them in proper places, but I neglected doing so; not even putting in the honey-blocks, or closing such openings as were in the honey-boards. Of course after such an extremely cold winter, I expected that one-half of my colonies had perished.

I know of an apiary of 28 colonies which was moved in 1878, and left in a similar condition to mine; only 3 colonies were alive in the spring, but that was after a warm, damp winter had passed.

The winter before, my bees also were on as high and dry ground, and I lost only 1 colony by starvation; but they were not so much exposed, and had the entrance blocks in, but with no other protection.

Hereafter the only preparations for wintering I shall make will be these: 1. Leave the colonies on the summer stands, and see that each one has plenty of bees and sealed honey. 2. Protect the hives from dampness as far as possible. 3. Leave the entrances open about 2 to 4 inches, according to the strength of the colony. I would pay no attention to upward ventilation. Keeping the hive dry and the bees furnished with plenty of sealed honey, are the main ideas in wintering.

Paint Lick, Ky.

For the American Bee Journal.

Bee-Keeping in Florida.

B. M. LINGLE.

I left my home in Indiana last October, to spend the cold season in the South. The winter here has been very pleasant indeed; but some of the old citizens say it was the coldest known for many years. There have been only two damaging frosts. Vegetables have been killed twice, and the gardeners are now shipping from the third planting. There were only a few days during the winter that bees did not work. About March 1, a lady gave me 2 colonies in rotten box hives. I began making hives to which to transfer them, and before I had completed the first hive one of the colonies swarmed. I hived the swarm, and soon transferred the colonies. They have been working nicely, but I have received no honey from them. Palmetto is beginning to bloom, and I think the bees will soon fill the sections. Here bees are kept in box hives; and when the apiarist wishes for some honey, he takes off the top of the hive and cuts out the honey. One of my neighbors had a swarm issue the other day, and it settled on a small tree. He put an empty hive under them, and then stepped back out of danger, and threw a club at them, but did not knock all of them off; so he took a fence rail and struck the tree, jarring off the balance. To my astonishment all of them went into the hive. Before leaving Indiana, I packed my 35 colonies with wheat chaff, on the summer stands; and although the mercury was 30° below zero during the winter, I was informed that my bees were all right. Bees require no chaff-packing here, but need plenty of shade.

Palmetto, Fla., May 1, 1884.

For the American Bee Journal.

Randolph, N. Y., Convention.

Those interested in apiculture, met at Randolph, N. Y., on May 6, and organized the Western New York and Northern Pennsylvania Bee-Keepers' Association, by the adoption of a constitution and by-lays, and the election of the following officers for the ensuing year:

President—H. S. Elkins, Kennedy.
Vice-Presidents—O. H. Phillips, Conewango; S. S. Sleeper, Holland; H. D. Gates, Gerry.
Sec.—W. A. Shewman, Randolph.
Treasurer—V. Page, Kennedy.

These subjects were discussed: Regulating the price of honey; selling unripened honey; successful wintering; packing vs. other methods; division vs. natural swarming; age and prolificness of queens; clipping queens' wings; how to produce the most honey; how to prevent after-swarming; circus with fertile workers; how to winter for $1.00 per colony; feeders, etc.

Those present represented 879 colonies in fall; spring count, 824; loss 55.

After a vote of thanks for the use of the Odd Fellows' hall, the Association adjourned to meet on Sept. 1, 2, at Jamestown, N. Y.

W. A. SHEWMAN, *Sec.*

For the American Bee Journal.

Bee-Keeping in Nebraska.

O. A. MULLON.

The working season for the bees has commenced in Nebraska. The spring has been backward; but since the middle of April bees have been at work on the maples and the cottonwood. Along the creek bottoms the abundant wild plum is in full bloom. It is interesting to mark the progress in bee-culture in a prairie State. The bee goes with the orchard, and the cultivation of flowers. For years the orchardists on the Missouri bluffs have been bee-keepers; it is only of late that apiaries have been located on the prairies. Fruit growing is extending west from the Missouri river, up into the Republican valley; Mr. Geo. M. Hawley, a mile and a half from Lincoln, had 175 colonies during the winter, in a large, dry cellar, and put them out about April 1,—later than is usual in Nebraska; the backward spring being the cause. His losses were not over 5 per cent, and that among the nuclei. The season now promises to be a good one.

Lincoln, Neb., May 1, 1884.

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

Local Convention Directory.

1884. *Time and place of Meeting.*

May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.

June 6.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Prospects for a Good Honey Crop.

As far as I can learn, bees have wintered well in this State, and are doing nicely at present. I have 8 colonies working in upper stories. I never saw bees work harder on linden and wild - plum bloom. The only trouble is that I have not enough strong colonies. I have extracted some honey, but do not like it. Buckeye is just commencing to bloom, and if I am not badly mistaken, I will have some honey soon. White clover never looked better; and I, for one, feel good over the prospects for a good honey crop in Iowa, for 1884.

Wm. Malone.

Oakley, Iowa, May 7, 1884.

Bees Well Wintered.

I lost no colonies in winter; 8 were wintered in a shed, being packed in straw with a chaff cushion above the frames. I use the Simplicity-Langstroth, 9-framed hive. One colony wintered entirely on unsealed syrup-honey, which I had fed them late in the fall; and some combs were half full of pollen. I find this colony the strongest at present. Fruit bloom has just commenced, and promises well. The spring has been rather backward.

J. J. Thieroff.

Defiance, O., May 7, 1884.

Bee-Business Overdone.

Judging from the price quotations of honey during the past 12 months about here, and in the country at large, the bee-business is being overdone. A little more reduction and all profit will be gone.

C. Covell.

Buda, Ill., May 9, 1884.

Bees Storing and Breeding.

I put 107 colonies of bees into the cellar about Nov. 20, and placed them on their summer stands on March 26 and 27. The rats got into the cellar and destroyed one colony by eating nearly all the combs. I have lost 2 colonies since they were removed from the cellar. I do not think I would have lost any had it not been for the rats. All the colonies over which they passed in going to and from the one they destroyed, had diarrhœa; caused, I think, by being frequently disturbed, for all others were free from it. My bees have never before been in as fine condition at this season of the year. In looking them over to-day, I find nearly all the colonies strong, and many of them with from 3 to 5 frames nearly full of sealed brood. Two of my neighbors reported to day that they had found sealed queen-cells. This is very uncommon in this latitude so early in the season. The bees have stored quite an amount of honey from fruit blossoms during the past 10 days.

Reuben Havens.

Onarga, Ill., May 5, 1884.

Small Grain Looks Promising.

Willow is in full bloom, and the bees are busy working on it. My first swarm of Italians came out on May 10. Spring has been quite backward, but now prospects are better than was anticipated. Small grain is looking as well now as it has in many years past, at this season. Nearly all the farmers are planting corn.

Edmund De Lair.

Oketo, Kans., May 12, 1884.

Small Loss in Wintering.

The spring has been cold and backward. Soft maple is just in bloom. Bees have wintered well in this section. I put 42 colonies into the cellar last fall, and all came through in good condition except one, which was queenless. Out of 300 colonies in this neighborhood, not more than 3 per cent. were lost in wintering.

C. S. Hawkins.

Sauk Rapids, Minn., May 12, 1884.

Anticipating a Lively Time.

While others have lost heavily in bees during the past winter and this spring, mine came through all right. I had them packed in single-walled hives on their summer stands, with 2 chaff division - boards, and leaves packed on the outside. I fed sugar syrup; nearly all the bees in this vicinity which were fed in this way came through all right. The principal cause of loss in bees here in Maine, is unwholesome stores, collected from elm and other kinds of bloom. It is yet cold, but we anticipate a lively time soon.

F. D. Welcome.

Poland, Me., May 12, 1884.

Large Increase.

I had, in the spring of 1883, 17 colonies of bees, 15 of which proved very prolific, and on May 26, the first swarm issued. All were in box hives. I had prepared about 25 hives for the increase, and intended to transfer the bees into the Simplicity-Langstroth hives; but I got only 4 transferred before the first swarm issued. From this time on they continued to swarm so much, that I was unable to prepare hives fast enough. It was no unusual thing to witness 2 swarms issuing at once, and occasionally a third would get mixed up in spite of my efforts. In the fall I had 60 colonies. I sold 4, lost 3, and built up 2 nuclei with tested Italian queens. I put 55 colonies into winter quarters, and all except 2, which were queenless, came through in good condition. I now have 55 colonies and one nucleus, from which I am obtaining eggs with which to Italianize. The surplus honey produced in my apiary last year, did not exceed 500 lbs. of comb, and 200 lbs. of extracted honey.

J. M. Hambaugh.

Versailles, Ill., May 14, 1884.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., May 19, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted. Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

Chas. F. Muth.

NEW YORK.

HONEY—The prospects are that but little honey will be carried over, and that will all be in 2-lb. sections. More one-pounds should be produced for this market. We quote:

Fancy white in 1-lb. sections, packed in clean crates, 16@17c; 2-lb. 13@15c. Fair to good white, 11@14c; dark, 10@13c. Extracted, 8@9c.

BEESWAX—Scarce, 36@38c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—Extracted honey is a drug here. Very little of it is being used for manufacturing or baking purposes. Parties who last season used from 500 to 600 pounds, have for the past winter, bought not to exceed 100 pounds in a like period of time. Many producers are anxious to realize on their last season's product, but it is impossible to find purchasers, even at the low price of 6 and 7 cents per pound. Comb honey stocks well reduced, but prices are low for anything short of fancy, quotable at 8@16c per lb.

BEESWAX—Scarce at 30@37c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Market is almost lifeless, there being no stocks of any consequence, and little or no demand. New honey is expected in about 3 weeks. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—I had orders to-day for 2,000 lbs. of choice comb honey in 2-lb. sections glassed on both sides, of which I had only 600 lbs. on hand. I can place several thousand pounds of 1 and 2-lb. sections readily at 15@16, if in good order, and glassed on both sides. Extracted in fair demand at 7@8½c.

BEESWAX—None in this market.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—Market continues very fair, particularly for choice 1 lb. sections, which are in good demand at 18c; 2 lbs. do not sell so readily, but in the absence of 1 lbs. it moves at 17c. Second quality is very slow at 14@15c, and extracted not wanted at all in any shape.

BEESWAX—Very scarce; would bring 35 cts. on arrival for choice yellow.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8½c.

Geo. W. Meade & Co., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 25
" 200 colonies (420 pages)...... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

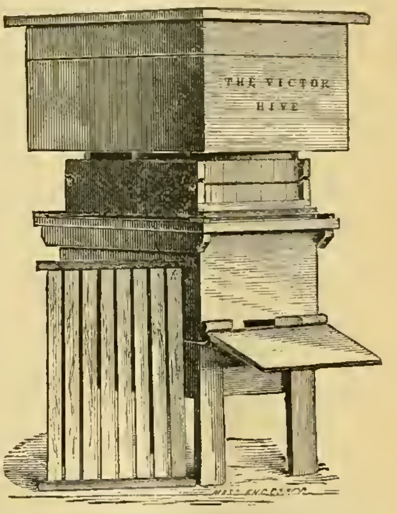
☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

ITALIAN QUEENS, HIVES, etc.
R. GRINSELL, Baden, Mo.
21A1t

TESTED QUEENS, $2; untested, $1; 4-frame Nuclei, $3.50 and $4.50. Mississippi Wax Extractor, $3. OSCAR F. BLEDSOE, Grenada, Miss.
21C12t



It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

SECOND TO NONE!—ITALIAN Queens and Nuclei. For prices see advertisement for April 30th.
W. C. LESTER, Washington Hollow, N. Y.
21A4t

Bees! Queens! Nuclei!

INSTRUCTION IN BEE-KEEPING.

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

QUEENS.—I breed Queens by the best methods, and from the best stock. Queens ready after May 20th. Untested, $1.00; tested, $2.00; selected tested, $3.00.

NUCLEI, with untested Queen, $3.50; with tested Queen, $4.50; with selected tested Queen, $5.50.

INSTRUCTION.—July 7, 1884, I shall begin instructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address, **O. CLUTE,**
10Dtf IOWA CITY, IOWA.

COMB FOUNDATION MILLS.

The "Best" and "Cheapest" in the market. Send for Sample and Price List free.
PAUL SPOERKE, Fond du Lac, Wis.
14Dtf

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

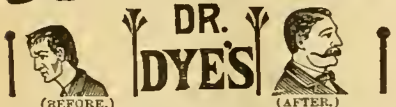
SMITH & SMITH

Want to give away 5,000 of their Illustrated Catalogue and Price List of **Bee-Keepers' Supplies.** **Special Attention** given to the

Simplicity One-Piece Section,

Also Hives, Smokers, Foundation, etc.
SMITH & SMITH,
6D10t KENTON, Hardin Co., OHIO.

30 DAYS' TRIAL



(BEFORE.) (AFTER.)

ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address
VOLTAIC BELT CO., Marshall, Mich.
6D1y

Syrian & Italian Queens

Syrian Queens bred from Queens imported from Mount Lebanon. Italians bred from best imported and selected home-bred. Tested Queens of either race before June, $3.00 each; in June, $2.50; after June, $2.00. Untested before June, single Queen, $1.25; 6 or more, $1.00 each; after June, single Queen, $1.00; 6 for $5.50; 12 for $10.00, or "Cook's Manual of the Apiary," cloth only 90 cents with order for Queens.
I. R. GOOD,
14Dtf 4B3t SPARTA, TENN.

Don't Fail to Send to the inventor and manufacturer of the **Bailey Swarm Catcher,** for Circular and Price List of Catchers and Bee Supplies.
16D4t **J. W. BAILEY, Ripon, Wis.**

ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

SOMETHING NEW!

SEND TO

E. B. WEED, No. 95 West 2d Street,

Cincinnati, O., for a sample of

FOUNDATION that cannot sag or break down, with side-walls of Pure Wax from one-sixteenth to one-fourth of an inch high. **Cheaper than any other make.** 21A1t

NEW INVENTION.

Patented Oct. 17, 1882.

Bees forced to leave their surplus honey before removing it from the hive. Saves valuable time and labor; prevents robbing, and the liability of being stung. The Bees are first cut off from the brood hive, by closing the openings in a slat honey board; the conductor is then placed in position, which connects bees in surplus honey with brood hive. They soon find that they are imprisoned, and being anxious to escape, pass out through the Conductor into the brood hive. It also prevents their return.

Conductor and Langstroth hive complete	$6 00
Conductor and Honey Board, any size, and Sections to fill, which shows all the improvements	1 50
Conductor, by mail	50

Send for Circular giving full particulars.
JOHN W. SILCOTT,
14D4t SNICKERSVILLE, VA.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,
J. P. H. BROWN,
12D8t 4B4t AUGUSTA, GA

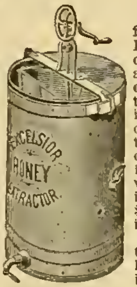
GIVEN COMB FOUNDATION

And Choice Queens a Specialty.

Circulars and samples free. Send for them. It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.
G. H. KNICKERBOCKER,
15eow4t PINE PLAINS, N. Y.

WHITEWOOD OR BASSWOOD SLICED SECTIONS, 4¼x4¼. A decided success. Can be used in Cases or Frames; $2.00 per 1,000. Hives and Cases good and cheap. Address N. E. DOANE, Pipestone, Berrien Co., Mich. 16D4t

EXCELSIOR
HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	13x20		12 00
For 4 " "	13x20	"	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

11,000 SOLD SINCE 1876.

12th Thousand Just Out!

11th Thousand Sold in Just Four Months!

2,000 Sold the past Year.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
State Agricultural College, LANSING, MICH.
18C7t 20D12t

DR. FOOTE'S
HAND BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

NEW AND USEFUL
Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.
D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

ITALIAN BEES AND QUEENS.

Send for Price List to
D. B. BROWN, DES MOINES, IOWA.
10D7t

BE SURE

To send a Postal Card for our Illustrated Catalogue of APIARIAN SUPPLIES before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.
J. C. SAYLES,
51D15t 1B5t HARTFORD, WIS.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

A11tf **J. VANDERVORT, Laceyville, Pa.**

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

CHEAP! CHEAP!

Full Colonies. Nuclei and Italian Queens. Send for Price List before buying elsewhere.
DAN. WHITE, New London, Ohio.
18A5t 5B1t

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.

Price, 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

Sixth Thousand Just Published!

New and Enlarged Edition OF BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

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AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

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Bees, Hives, Extractors, Smokers, Dadant Foundation, and other Supplies. ARTHUR TODD, Germantown, Philadelphia, Pa. 19A5t

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ITALIAN QUEENS, DADANT FOUNDATION, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY,** Wenham, Mass.

Bingham Smoker

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,
G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

The Eureka Wiring Tool

For pressing wire into Foundation. **Price, by mail, 50 cents.** Send for Circulars. FOUNDATION and EXTRACTORS for sale.
17Atf **C. M. RULAND, Rockton, Ill.**

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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ITALIAN BEES

AT BED ROCK PRICES.

COLONIES—8 Langstroth Frames, in light shipping box	$ 4.50
8 Thomas Frames, in light shipping box	3.00
NUCLEI—2 or more, 2 frame, with tested queen	2.00
2 or more, 2 frame, with untested queen	1.50
QUEENS—Tested, by mail	2.00
Untested, by mail	1.00

After June 1st, 25 per cent. off.

After June 1, tested, per dozen	12.00
After June 1, untested, per dozen	9.00

Reared from Imported or Selected home-bred Mothers. No Foul Brood ever known here. Address, **C. WEEKS,**
17A8t CLIFTON, Wayne Co., TENN.

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

STANLEY'S

Automatic Honey Extractor

AND SMOKER.

Send for descriptive Circular and Prices to
G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

Early Spring! Order Now!

To introduce my Italian Queens, I will send one of my Tested Queens, if ordered before May 20th, for $2. Warranted Queens, $1. Send $2 and less, in common letters, at my risk. **E. P. BAKER,**
10A11t Box 342, DES MOINES, IOWA.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid in May and June, each	$ .50
Italian—untested—not warranted, in May and June, each	1.00
Italian warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

1868. 1884.

HEDDON'S

COLUMN.

BEST GIVEN

COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4 50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

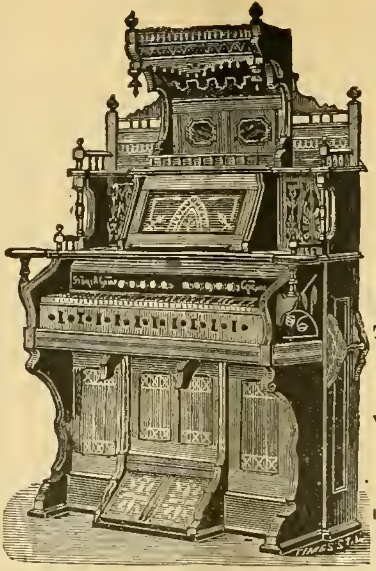
CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,

DOWAGIAC, Cass County, MICH.



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Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros., Haines Bros., Mathushek, Simpson & Co., Story & Camp.	Estey, Story & Camp. The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street, 203 N. Fifth Street,

CHICAGO. ST. LOUIS.

NEW Vegetables
A Specialty.
GREGORY'S SEED CATALOGUE
1854.-1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues FREE to all.

JAMES J. H. GREGORY, SEED GROWER, MARRLEHEAD, MASS.

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."

GEO. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,

Lock box 995, Belleville, St. Clair Co., Ills.

18A13t 6B3t

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS, before ordering your

APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

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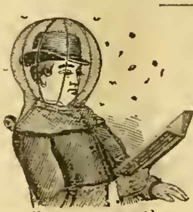
A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

ALFRED H. NEWMAN,

923 West Madison Street,

CHICAGO, - ILLINOIS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 a year.

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,

1ABly Lock box 995. Belleville, St. Clair Co., Ills.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY

BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago. Ill.. May 28, 1884. VOL. XX.—No. 22.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, $2 a year; Monthly, $1.

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THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

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☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

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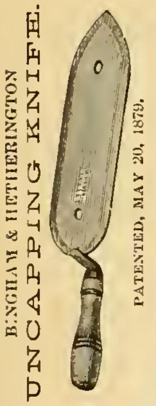
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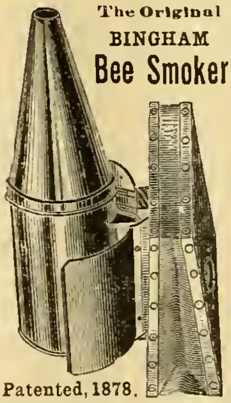

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Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellung über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

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THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., MAY 28, 1884. No. 22.

THE AMERICAN
BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
Editor and Proprietor.

Seasonable Hints.

The busy season in the apiary has now arrived, and we hope all are prepared for it. Very frequently the delay of a few days in getting hives, sections, comb foundation, etc., results in a partial failure of the honey harvest, or the loss of many swarms of bees. Therefore every one should endeavor to get such supplies before they are needed, and thus save annoyance and loss. We hope all our readers now have such things on hand. If not, no time should be lost in getting them. To buy the lower-priced articles simply because they are *cheap*, frequently is extravagant economy. Those that are sold for the lowest price, are often the most expensive when put to the test.

Another point is to provide pasturage for the bees, so that when the usual honey dearth comes, the bees may revel in nectar provided by the timely planting of good honey-producing plants.

Judicious forethought, displayed by liberally scattering good seed for honey plants, will be supplemented by Nature in the future, by extending that pasturage when most needed by the bees, and will also furnish the seed free of charge for doing so.

To those who expect to solicit public patronage of any kind, there is no economy in practicing a "masterly inactivity" by waiting for the public to discover unadvertised merits. If they have more bees than they wish to keep—or any meritorious supplies to sell to bee-keepers, let those papers that are devoted to that specialty announce it. All such should provide themselves with good stock or articles to sell, and then place themselves prominently before the bee-keeping public as ready to receive its favors, and return an *honest equivalent* for orders lodged with them.

A word of caution is necessary here. We have received complaints of some who sent orders last year to supply dealers that have not yet been filled. Purchasers should be cautious about sending money to those who have not established a reputation, or can point to a good record.

Spurious California Honey.

The course of adulteration has made itself known in California, and in the following letter, Messrs. Stearns & Smith, honey dealers in San Francisco, propose the following remedy:

> "Through the widely circulated American Bee Journal, we desire to call the attention of our Pacific Coast honey producers, and especially those of California, to the urgent and immediate necessity of a law or laws against the adulteration of honey, and the sale of the same. Our dairymen have met and discussed the matter of adulteration, and our State Legislature has enacted a law protecting them against the sale of "bull butter," or oleomargarine, and we hope our different Bee-Associations will take this matter up. California honey has a world-wide reputation for purity and excellence. There is for sale on the market a vile compound, under fancy labels named "honey," composed of about 40 per cent. of honey, 50 per cent. of glucose and 10 of water; it is a libel on our industrious bees; it works a great hardship to their owners; and, where it is shipped to other places, it gives our fine honey a bad name, and there lies the great damage to our honey producers. We hope they will talk this matter up and send men to the next State Legislature that will look to their interest and protect by law this great industry of California.

◆

☞ Mr. Orange Judd, who has for nearly a quarter of a Century edited the *American Agriculturist* in New York, has now moved to Chicago and become editor of the *Prairie Farmer*, and we hope he will make it a success. We welcome him to the West.

☞ Some of the results of carelessness may be seen from the following, which occurred this week. We had a letter from a subscriber who complained of not getting any of his Bee Journals for over a month; and then adds, send my paper to——post office. After spending much time to look the matter up, we found that he had moved from the former address, but did not notify us, expecting perhaps, that we "knew all about it," and would change the address. After several weeks the P. M. notified us to stop sending the Bee Journal; that the person addressed had *moved away*. Then the name was taken from the "type-mail-list." Now we have to get it "set up" again, and inserted, send the numbers over again, and all the trouble and annoyance, on account of pure carelessness. This is only one of the many results of such heedlessness occurring all the while. We *do* wish all would do business in a common-sense way.

◆

☞ The *Indiana Farmer* has this to say about the use of bee-veils: "Many decry the use of veils in the bee-yard, but we believe that all beginners should use them until they acquire confidence in themselves. After one becomes conceited enough to think bees will never sting him, then let him throw aside the veils—at least for a time." There are times, during a good honey flow, that any one may do without any protection, but it is always best to have a smoker near by, ready for use; for when needed at all, it is very necessary.

◆

☞ We have received Prof. John Phin's book, entitled "A Dictionary of Practical Apiculture." It contains 80 illustrated pages, and is bound in cloth. Price 50 cents. This has long been a necessity, and will be found to be a very valuable assistant to writers on apiculture. We hope it will lead to the more correct use of apicultural words. For sale at this office.

CORRESPONDENCE

For the American Bee Journal.

Priority of Location.

JAMES HEDDON.

I am glad that I started the investigation of this subject. The more glad am I, because that it is one of great interest to the honey-producers of the near future. All that the earnest and honest are seeking in this discussion, is to get a clear, general understanding of justice in the matter.

On page 311, Mr. Pond says, that in my reply to his article upon this subject, I "nowhere touch his position." Has he changed his position, since seeing that the practical honey-producers of the country have grown wise faster than he has, or he supposed they had? In order to discover that his "position" was to tear down my first claims upon this subject, read both articles. He set up a position, not of claims of priority, but actual ownership of nectar; that a poor man was "selfish," if he did not wish to have a rich one divide the honey-field with him; that professional amateurs had discovered most of the needs of the practical honey-producers, etc.

I thought I understood these positions; that they were weak, and I answered them. I think Mr. Pond has misunderstood me in referring to his being a lawyer. I had not the least idea of throwing a crumb at Mr. P.'s intellectual qualifications by mentioning his law-practice. The brightest ones, like the brightest apiarists, as a rule, make their business a specialty. What I meant was, that he who devoted all his mental or physical energies to the theory and practice of apiculture, and who must support himself and family from the profits of that business, would be most apt to have correct ideas upon the subject.

Mr. Pond, in using the term "right," forgets to prefix it with the word "moral," or "intellectual." We well know that all have and should have a legal "right" to locate where they please; hence the greater necessity for knowledge regarding this question, which is the very purpose of the present agitation.

It seems to me that the rest of Mr. Pond's arguments are like this last one, regarding "the butcher, the baker, and the candlestick maker." The fewer butchers and bakers we have in a town (below a certain number), the less the competition, and the worse for the buyers; because butchers and bakers (unlike honey-producers) are selfish, and want all they can get for bread and meat. They have no amateurs to tell them how wrong this selfishness is, in this communistic world where hardly any one looks much to his individual interest.

But in the light of our jealously watching the best interests of the consumer, it is, with us, very different from the "butcher and baker;" for any invention, or aught else; take the honey extractor for instance, which enables us to produce honey more cheaply—gives it to the consumer correspondingly cheaper.

As we increase the number of well-gathered honey-fields, we lower the price of honey, redounding to the interest of the consumer. And in proportion, as we increase the number of apiarists in any given area or field, making the product cost each bee-keeper more than it would did he enjoy the entire field alone, we are working against the interest of honey consumers, as well as the producers, in this divided field.

Mr. Doolittle does not mention the basic principle of my former article; let me repeat it: We believe from our experience, observation, and reading, that some number of colonies will overstock a field; *i. e.*, that there is a limit to the number placed in that field for profit. These can be owned and managed much more cheaply by one apiarist than by two; and one apiarist can manage them more profitably in one field than in two, provided that one is not overstocked.

I believe that the future price of honey will be regulated by the average cost of production; that he who produces at maximum cost, will fail; and he who produces at minimum cost, will succeed.

If we leave all legal "rights" to the field out of the question, then, for argument, throw out moral "rights." Can you not see that if all coming apiarists were properly educated upon this subject, there would be no division of fields, or need for this discussion?

Regarding personal experience, Mr. D. must take into consideration several facts which are not applicable to the future: 1. Bee-keeping is well-nigh a specialty with him; he has it "on the brain;" his neighboring farmers did not. About the time he had run in, they had run out. Bee-culture was changing from the old to the new system. He changed with it—they did not. In times and under conditions like that, he certainly had a right to go to keeping bees in that field; and his experience is only another evidence of the "survival of the fittest."

In regard to his chapter No. 2, where he has helped neighbors into business, he did just what I have done several times. His neighbor succeeded probably because he kept a comparatively small number of colonies in a field which was, no doubt, much more difficult to overstock than mine or the most of other fields. His honey-flow coming less continuously and more bountifully, makes it difficult to overstock.

I am beginning, this spring, with something over 200 colonies in each of two apiaries, and I do not believe that any second party can make apiculture profitable in either of these fields. If I am mistaken, I heartily wish I could be convinced of it; for then I would not sell a colony until I could start in each field with 400 colonies, spring count. Every additional colony that I keep, I can manage some cheaper than any one of the preceding number.

One would imply, by one of Mr. D.'s sentences, that if one did start in my field, I would be his enemy. By no means. Three or four have tried this, during the past 15 years. Because I had opposition, which might poison some minds, I took special pains to be courteous and friendly, and did all I could to assist them. Each made an ignominious failure, never producing one pound of honey that did not cost more than twice as much as it would bring.

Among intelligent and energetic apiarists, some are more successful than others, and perhaps would be so even in the same field; but there is not enough difference for any man to run out another of this class, who already has a good start in the business. There is no man whose energy and intelligence we need fear, who will be so weak as to attempt to do such an absurd thing. Capital has too much judgment and acquisitiveness behind it, to take so rash a step.

Messrs. Doolittle and Clarke concede that my ideas on this subject, with certain modifications, are correct. I have little faith in any pretention, in the line of apicultural missionary work. Bee-keepers like others should do business upon business principles. The intelligent apiarist does not expect, and will not accept of something for nothing. We do not want charity; we want honesty and justice. Give us the latter and we will never need the former.

Mr. Doolittle and myself seem to be "odd sheep" in the apicultural field. He is the only apiarist who depends upon honey alone for his support, who has a passion for "gushing." The latter, however, seems to be dying out in him. I am not sure but that I am almost, or quite, the only one whose financial interests are as great in supplies, as in the production of honey, and who is trying to brake the wheel of overdone apiculture. This may, perhaps, be accounted for upon the grounds that each thinks he is following truth, and enjoys her sweet fragrance more than dollars. Let us trust that this is so.

My friend and antagonist, W. F. Clarke, is a hard man to handle, even though he is wrong. His experience in discussion, literature and the world; his terse expression and vigorous, pointed thought, together with little experience as a modern apiarist, and never having a necessary concern in the interests of honey-producers, makes it very difficult to set him aright. Mr. Clarke should not claim better judgment in regard to the honey-yielding capacity of my own locality, than I have, after watching the results in it for 15 years. I ought not to be "oversensitive" in regard to matters in which my bread-and-butter interests are so evenly divided. I feel that I am not. I detest "monopoly," and I see no monopolizing spirit in trying to arrange matters so that honey-producers can sell their honey cheap (for they will have to), and yet be able to decently provide for their families.

Mr. Clarke, having such great faith in my field, congratulates me on the comforting fact that, when I find so many bee-keepers in it, that none can succeed, we can "plant." Will it not be ample time to agitate the "planting" question, when at least one-half of the nectar now going to waste, in unoccupied fields, is gathered?

Have we not had evidence enough, that farming and apiculture are naturally opposed to each other's success? I can show ample evidence in this County.

I have already tried to show that comparison between selling goods and securing honey are great misfits; also between honey-producing and gardening. Increase gardens all you please, and the operations of one on the next acre, in no way makes the productions of the next one more expensive, as is the case with honey-production.

Mr. Clarke says, "it would be a long time before a village would have a second store, if the prior consent of merchant No. 1, must be had before starting it."

In this, Mr. Clarke has had a good chance to judge, and is, no doubt, correct. We also know that the propensity of benevolence is equally distributed throughout all the different legitimate callings of life. Are bee-keepers more interested in humanity? Or is it only the few who have some "ax to grind" (and expect that the dupes to these broad, philanthropic views, will turn the grind-stone), who advise us to abandon self-interest, for the interest of an outside class, who are assiduously working for their own individual interests.

Mr. Clarke wonders what I will think of him after reading his article. Well, I think he is among the "mistaken," and always will be, I presume, until he lays aside all other sources of income, except apiculture, and then in a few years will get at the facts. The inexperienced are on the one side, and the experienced on the other.

Dowagiac, Mich., May 15, 1884.

For the American Bee Journal.

Diarrhœa alias Dysentery.

J. F. LATHAM.

The editor of the Bee Journal defines the malady "Bee-Diarrhœa." Perhaps his definition is as correct as any, when an allusion to the disease is made in a general sense; but, as the symptoms accompanying diarrhœa, and those accompanying dysentery, are developed by phases not strictly allied, characteristically, we will term the kind we wish to talk about dysentery or abnormal secretion; and assume a position that will admit of an analogical construction.

Any cause which produces an excessive stimulation of the animal functions, has a tendency to produce a deranged secretion of the fluids which are demanded by the animal economy to replace, by assimilation, the waste of organic tissue. In normal conditions the animal functions have a particular work, and each organ, by performing its allotted duties, is not over tasked by being compelled to aid a defective co-worker; no excessive heat is generated in the removal and production of animal tissue.

Nature receives her revenues, and disburses them as her requirements demand, and the whole organic mechanism moves harmoniously. Introduce agents in any form, or of any character, that will cause disturbance in this harmonious process, and disorganized action will be the result. It matters not from what source the irritating elements are derived, the consequence of their working possesses a similarity, although they may not at all times effect the same results, being modified in a greater or less degree by the influence of surroundings or conditions in which their subjects are placed.

If this functional derangement continues for a certain time, it will terminate in general debility, weakness, defective action, etc. Digestion and assimilation are impaired and the chyle that should aid in renewing the wastes of the body, remains in the intestinal receptacles, and becomes virulent.

As bees in our Northern climate are compelled to remain in confinement a long time in winter, a portion of this effete matter is drawn into the circulation; and, as they will not void their feces in the hive, except from dire compulsion, it may be very correctly imagined what the consequence will be, when a colony is forced to combat such baneful conditions, without an opportunity to relieve its distended organs when necessity demands.

The causes tending to a development of the deranged condition alluded to in the foregoing, are so numerous and variable, and so connected in their relations, that the effect of their workings cannot be attributed to any one cause alone; but as the food eaten, the air breathed, and the means used for protection from cold, comprise the main requirements for the support of animal life, so do they contain elements which will tend to its destruction when improperly constituted, or defectively applied.

Nature has constituted the honey-bee to maintain life, and perform its allotted duties from the nectar and farina of the flowers; and, in the season of bloom, when she can sip the exuding sweets, and gather the chaste pollen in their pristine purity, and rear her young on their health-producing elements, her workings display vigor and activity. Then nature—instinct, — the indices of attributes omnipotent, require no manipulation.

But, as the devices of man have made the bee a domestic contributor to his desires, when the frosts of autumn forbid her ærial wanderings, and the rigors of winter confine her to the hive, his intelligent care is demanded for her protection and support. To fulfil the requirements of nature, honey in its original purity, or its substitute, is the only aliment needed by a colony of bees in winter; in fact, it is the only food they will partake of when inactive. As children of nature they live by her monitions, and in their acts comply with her promptings.

During their winter's sleep their physical requirements demand but little nitrogenous food. Comb-building is dispensed with, and no brood is reared, unless conditions prompt the renewal of a too rapid loss of numbers; then activity requires a nitrogenous diet, and pollen, an indispensable auxiliar in brood-rearing, is needed, and will be consumed by the old bees while nursing their young. The young bees reared under such conditions, and those reared late in the fall and do not leave their cells until winter has set in, must retain their feces until an opportunity for a "fly" is given them. If the weather is not favorable for such an opportunity, at a proper time, they must invariably succumb to the effects of virulent fœcal accumulations.

This condition is prominently indicated by the bees crawling from their hives late in the fall, or in their flying out and perishing on the snow in early winter. This condition of brood-rearing after cold weather has set in, and its harmful effects on pollen-eating bees, seems to be one that will bear investigation by those who so very strenuously advocate "late fall breeding."

That there are other conditions, is evident; but, as activity prompted the consumption of pollen in this instance, it seems that to activity, should be accredited the prime cause of the trouble. Another cause exists in sour honey—nectar not sufficiently ripened to prevent acetic fermentation, and in the parasitic productions incident to such a stage of decomposition. This fermentation may take place before the honey is used as food, or it may occur in the debilitated stomach or intestinal canal of the consumer, when conditions will not permit sufficient capillary contraction to expel that proportion not needed in a healthy digestion or assimilation.

To unripened nectar, may be added other compounds accumulated as stores, which are too well known to the observing bee-keeper to need enumerating. All colonies of bees are not as neat in their house-keeping as health demands. The combs in some colonies are not kept as free from refuse matter as those in others; and, as the nectar when stored in foul combs must partake of their uncleanliness, it cannot make such food as bees require in winter.

From these deducements, based on observation, and confirmed by the statements of others who have lost their bees under conditions attributable to the causes named, I have no hesitancy in stating that acetic fermentation is the first great cause of diarrhœa among bees during confinement in winter.

As a test, let any bee-keeper take a colony of bees that he wishes to kill, and feed them to distention on diluted honey in its first stages of fermentation, with or without pollen, keeping them the while in a cold atmosphere without "flying" at proper intervals; and if the process does not produce diarrhœa, let us know through the Bee Journal.

Good air and protection from cold, are requirements that should receive a rigid attention from the bee-keeper, if located in our Northern climate; especially in the New England States, where one hour does not indicate what the next may bring forth.

Approximate localities differ. One apiarist may suffer loss of bees, and another a few miles distant may survive the winter in good condition; the colonies in both instances having received the same care, or as nearly so as is possible to give.

A warm, damp atmosphere will not kill a colony of bees in winter. It may stimulate activity, and induce brood-rearing; but if brood-rearing is not induced, the warmth generated by the cluster cannot be harmful where means are provided for a proper circulation of fresh air inside of the hive.

When in a semi-dormant state, the denizens of the hive require but little oxygen to support life, or to neutralize any harmful effects resulting from the accumulation of carbonic-acid gas in their surroundings. As this gas, when occupying space in quantities detrimental to animal life, moves earthward, it is easy to comprehend how readily the inside of a bee-hive may be freed from its effects, by proper downward ventilation, accompanied by an imperceptible "upward ventilation;" *i. e.*, an "upward ventilation" not strong enough to produce a rapid current of air through or around the cluster.

Again, where the life-supporting elements: oxygen, hydrogen, and carbon, are needed to maintain animal heat, dampness in some form is an actual necessity; for without these elements, the combustion required for the propulsion of the animal mechanism will not be produced.

Cumberland, Me.

For the American Bee Journal.

Northern Ohio Convention.

The Northern Ohio Bee-Keepers' Association met in the City Council Chamber at Norwalk, O., April 24, at 10:30 a. m., with President Samuel Fish, of Milan, O., in the chair. The Secretary's report of the last meeting was read and approved. Seven new members were enrolled.

The election of officers was postponed until the afternoon, and the forenoon was spent in receiving reports from the members on "Wintering."

Pres. Fish: My Bees wintered successfully in a bee-house; set them out on April 14, after a confinement of about five months; they might have been profitably left in ten days longer. They came out strong in bees, but with very little brood; early brood-rearing having nearly ceased, but was rapidly resumed on being set out. Wintered 6 colonies on the summer stands, in chaff hives; lost one; I prefer indoor wintering.

H. R. Boardman winters bees successfully in a bee-house, essentially the same as Mr. Fish's, and in about the same manner, except setting them out nearly a month earlier. The old bees having died the colonies are light but have an abundance of mature brood.

These two reports, so different in result, called forth a spirited discussion upon the policy of setting out bees early. The prevailing sentiment was not favorable to setting out early, unless set back again until the cold winds of March were over.

S. F. Newman winters bees in the cellar and on the summer-stands, in chaff hives. He prefers chaff hives and out-door wintering.

E. R. Gibbs wintered them successfully in chaff hives out-doors.

Mr. Darling: My wintering was not successful; they wintered out doors on summer-stands; I attribute my loss to lack of ventilation, from defect in the hive.

Mr. Bartow wintered them on summer-stands, with very poor results.

Dan White wintered them successfully on the summer-stands, in chaff hives, without loss.

Many other reports were received, all showing that bees wintered moderately well, but were much enfeebled by the cold and unfavorable spring.

Adjourned till 1:15 p. m.

The afternoon meeting was called to order at 1:30, by the President. The following officers were elected for the ensuing year:

President, S. F. Newman, Norwalk.

Vice President, Mrs. A. Bartow, N. Milan.

Secretaries, H. R. Boardman and E. Townsend.

Treasurer, E. R. Gibbs, Norwalk.

Treas. Gibbs reports a balance in the treasury of $6.20.

Question—"Spring Management." Dan White described, with much enthusiasm, how he builds up in the spring even very light colonies, so that they will be strong enough to swarm in the swarming season, by using a division board in the hive to crowd the bees on as few combs as possible, and feeds, back of the division-board, either reserved stores or granulated sugar syrup.

Pres. S. F. Newman adopts about the same course as that practiced by Mr. White, except that he would not stimulate the lightest colonies by feed; but build them up from the stronger ones later in the season, by giving cards of brood.

Samuel Fish keeps his bees in late in the spring; discourages early brood-rearing, gives plenty of stores, uses the division-board sometimes, but does not attach as much importance to its use as many bee-keepers do.

Mr. Albright builds up light colonies in the spring by feeding sugar-syrup, which he pours into combs, and sets in the hive next to the bees; succeeds well in this way.

A warm discussion then arose upon the use of the division-board for building up colonies in the spring. Some advocated its use, and others would dispense with it as useless and unnecessary.

Mr. H. R. Boardman read a very interesting essay on Feeding Bees in the Spring, which will appear in the Bee Journal soon. [Ed.]

Question—"Swarming, and the Production of Comb Honey"—which was very thoroughly discussed.

Mr. Fish adopts the plan practiced by James Heddon, of Michigan. Mr. White thinks shade plays an important part in preventing bees' swarming.

Pres. Newman gives the swarm some of the combs and brood from the colony from which it issued, and also the unfinished surplus of the colony is given to the swarm to finish.

Mr. Boardman has long ago given up trying to prevent swarming while producing comb honey.

Mrs. Allen Bartow made a few very sensible remarks on "Planting for Bee Forage." She also read the following report by her husband, Mr. Allen Bartow, of his observations in Southern Texas, during the last winter.

Bee-keeping in Texas is more profitable, as a whole, than it is in the North. Wintering is not a problem, as they do not perish with cold as many have done in Ohio during the last and many preceding winters. The Texan bee-keeper winters his bees out-of-doors without any protection other than their summer hives, thus saving the cost of building expensive bee-houses. 1. They have short winters and consequently the bees do not consume so much of their stores as ours do. 3. The long summers afford more time for gathering honey, and the great variety and abundance of flowers furnish an almost inexhaustible supply.

Besides the small flowers which clothe all the plains and valleys with beauty, there is a great variety of trees whose blossoms afford honey; a few are: Linden, live-oak, black-jack, box-elder, sumac and agaretta.

They do not have the advantage of fruit blossoms, except the wild fruits, as there are but few orchards. Apples do not do well in that climate, and probably never will, and the same may be said of cherries. Peaches do better but they do not afford much honey. The cotton plant, however, affords considerable honey and of good quality. Buckwheat is raised with tolerable success and is another resource; but last though not least, is the "honey-dew," which, I was told by Mr. Surber and others, giving such large quantities when it occurs that the amount gathered is often surprising to the bee-keeper who is unprepared. The Texans use hives of various kinds, from the box to the latest improved frame-hive.

At Camp Verde I ate honey of good quality. The product per colony is 90 lbs. comb, and often it is 100 lbs. Last season was a poor one owing to the long drouth, and no doubt was an exception to the average season, as Mr. Surber told me his yield was about the same, and he is an intelligent man and a good apiarist.

In Texas the bee-keeper's enemies are the bee-martin and the moth. The careless lose largely by the latter. I visited one apiary, the owner of which had lost fully one-half of his bees by the moth. This was evidently the result of neglect, as he had too much other business, being a druggist. His hives were hard to handle, although they had movable frames, and they were also too much shaded. Bees require some shade in this climate, in the middle of the day in summer; but he had overdone the shade business, and as a consequence lost.

I believe bees handled there as we do in the North, would pay well. The climate is healthy and pleasant in winter and not overly warm in summer. The people are intelligent and courteous.

An interesting letter was also read by Mrs. Bartow, from Mr. A. B. Surber, a bee-keeper of Southern Texas, in reply to several questions asked him in regard to bee-keeping in that State.

The following was passed: "*Resolved*, That the thanks of this Association are due, and are hereby tendered to Mr. Samuel Fish, for the able manner in which he has presided over this Association during the past two years, and for the uniform kindness which he has at all times exercised toward its members." Mr. Fish thanked the members for their courtesy.

A vote of thanks was given to the City Council for the use of their room. Also to S. F. Newman, for his past services as Secretary of the Association.

Adjourned to meet at the call of the Secretary.

H. R. BOARDMAN, *Sec.*
S. F. NEWMAN, *Pres.*

* * *

For the American Bee Journal.

The "Keystone" Convention.

The Keystone Bee-keepers' Association met lately at Scranton, Pa.

After reading the minutes of previous meeting, the election of officers was held and J. Vandervort, of Laceyville, was elected President, D. J. Peck, of Harford, Vice President, A. A. Davis, of Clark's Green, Secretary, and C. E. Miller, of Justice, Treasurer.

After the transaction of business the subject, "Do Bees Injure Fruit or Crops?" was discussed; in which the majority of the members participated. The opinion expressed seemed to indicate that instead of being injurious they were a benefit in many respects.

One gentleman said that he had noticed that buckwheat always yielded a better crop if frequented by large numbers of bees, and so of other crops. An idea existed that some farmers paris-green their buckwheat and other crops for the purpose of destroying the bees, and a remonstrance was expressed against such a deplorable measure. The President stated that the English government has gone to considerable expense to have the common bumble-bee introduced into Australia for the purpose of fertilizing red clover, and had met with but partial success. Others who had experimented in several ways claimed that bees, to all classes of fruit, were beneficial and should be encouraged. Adjourned. C. E. MILLER, Sec.

For the American Bee Journal.

Northern Georgia.

L. K. DICKEY.

On page 139, in calling the attention of Northern bee-keepers to this country, I asked this question: "Why do not enterprising bee-keepers in the North, who are seeking a better field for their business, come to Northwest Georgia and help us develop out honey resources?"

On page 201 Mr. Leonidas Carson says: "The answer is plain. Enterprising men of all occupations in the North are loth to settle in the Southern States so long as lawlessness is excused and goes unpunished;" and then says he has reference to the trouble at Danville, Miss. I do not know whether he alludes to the riot at Danville, Va., or to the outrages in Copiah County, Miss. I can not see why the trouble at either or both of these places 500 or 600 miles distant should deter enterprising men of any section from coming to Northwest Georgia, unless there is evidence that our people sympathize with such lawlessness.

In my opinion there is no such evidence to be found outside the fertile imagination of Mr. Carson. I am a native of this State and county and an ardent Republican in politics, and now hold an honorable position to which I was elected chiefly by Democratic votes. No one can feel more keenly than myself, the injustice and wrongs perpetrated in some of the Southern States for political purposes.

Now let me say to Mr. Carson and others in the North, whose "eyes are turned southward," to the land he so beautifully describes, that our people are, in the main, plain, clever people, and are as law-abiding as those of any section of the union; and before becoming prejudiced against this section on account of those troubles which occurred in other States, and at great distances from us, to come, see, and investigate for yourselves. These unfortunate occurrences should no more deter you from coming here than the recent riot in Cincinnati, or the recent outrage on Mr. McDevitt in Ohio, should deter me from going to Grundy County, Ia.

For further information concerning our people let me refer you to an article published on page 171, BEE JOURNAL for 1881, written by Mr. Moon of Rome, Ga., who, I believe, was a Northern man.

This is a broken, hilly, mountainous country, with fertile valleys intervening. These hills are generally poor, though sufficiently fertile to grow fruit and vegetables, and moderate crops of grain. In the valleys it is reasonably productive, growing corn, wheat, oats, clover, fruit and vegetables. There is generally an abundance of running water. As a bee-country it is good, though our honey flow is not so profuse as it is in some sections of the North.

As I said in my letter, our honey resources are not developed. The largest yield that I have heard of is 160 lbs. extracted honey, per colony.

I think Mr. Good's advice on page 217 is timely and wise; though I think he has been in quite a poor country. I would much prefer a location reasonably near to Chattanooga which is a fast-growing city of about 20,000 inhabitants, and is of much importance as a manufacturing and railroad center.

High Point, Ga.

* * *

For the American Bee Journal.

What the Bees Think of it.

MRS. DR. E. MASON.

"Why so much uncertainty about wintering, ventilation, and spring dwindling?" I am thinking these much abused bees must often say, "what fools these mortals be. One stows us in a dark, damp, moldy and foul-aired cellar; restrains us of liberty, fresh air, and the bright sunshine, which is so essential to life and health, even in the coldest weather; another stows us in a room or dry cellar, but robs us of our liberty, prevents our flight also, until we crawl about the floor and die; another hills us up like cabbage and turnips, and almost all, more or less, shake us up, haul us away from our summer stands, fret and scare us until we are half crazy, every spring and fall. Then they talk of 'safe wintering' and 'spring dwindling.' Is it any wonder that, in our fright and anger at such treatment, we die, or, that our honey tastes strong and gives the cramps, and injures the sale of it? Give us gentle, loving hands to attend us, and our honey is sweet and healthful at all times. Good mortals, please let us rest from that kind of treatment. It is labor, fatigue, and loss to you, and disease, craze, and death to us. Please let us have thick, double-walled, chaff-lined hives, well painted to preserve the hive and keep the dampness out. Lay 2 or 3 bars or sticks, one-half inch thick, acrosss the top-bars, that we may pass freely over and cluster on the top-bars. Lay over us a new cotton or burlap honey-cloth, covering every crevice; for ventilation, in the shape of crevices, hardens the combs and honey, and is death to us. Then lay a pillow smoothly over the honey-cloth, and shut the box cover closely, leaving no part of the honey-cloth or cushions caught between the cover and the hive to absorb dampness."

There is no other cushion-material equal to feathers; for they retain the heat—are always dry and light, and the space between the cushion and the top of the box-cover, is a hot-air chamber. Cotton batting, covered with unbleached muslin, is the next best cushion as a substitute for feathers. Raise the back of the hive 2 or 3 inches higher than the entrance, so as to carry off all water, dead bees, etc.

I have kept from 50 to 100 colonies of Italian bees for 10 years, and I have never had any trouble in wintering them; nor had sickness of any kind among them; nor "spring dwindling," which can be prevented by commencing in January, to place rye flour in sunny places about the hives, and on the ends of the alighting-boards; also shallow pans with combs filled with slightly-salted water. A little judicious feeding stimulates and encourages the bees, and prevents their flying so far from home in the cold, spring air, to flour and sawmills, where sometimes whole colonies are killed by the flour and sawdust. Good wintering and spring care will prevent "spring dwindling." Keep the bees always on the same stands in winter and summer; put up good water-proof sheds fronting to the South or East, tightly boarded up on the back, eave troughs to carry off the rain at the back, and a wide board nailed across the front, to prevent the rain and snow from blowing in on the hives; and see that the earth or flooring under the hives is perfectly dry.

The advantage in keeping bees in one place is, that they are more gentle, and in swarming they rarely fly but a few feet from the shed, and settle on the first shrub or plant, and often on the corner of the same hive. As soon as they are hived, I lift them up and set them by the side of the hive from which they issued. If in rows near together, they are more friendly, and are not given to robbing.

As to disease among bees: I have not a doubt but that it is bred from dampness, mold, bad air, cold, and want of sunlight. One diseased colony might contaminate a neighborhood. Shut one family of children in dark, damp, and moldy rooms or basements, deprived of fresh air, sunlight, and exercise, and they may generate scarlet fever so deadly, as to deprive a healthful city of its inmates.

You do not want your houses filled with crevices, broken windows, and holes in the ceilings, in order to have "ventilation;" neither do your bees. They can fan in and out, with their wings, all the fresh air they want. Always have a sort of entrance hall or close portico in front of the hives. It shields the bees from cold blasts and sudden changes.

If the sun shines too warm on the fronts of the hives, and there is snow on the ground, stand up a shingle or board to shade the entrance, thus preventing their flying into the snow. Try this method of management. It has been a perfect success with my bees.

Vincennes, Ind.

* * *

For the American Bee Journal.

Clipping the Queen's Wing.

W. H. STEWART.

On page 612 of the BEE JOURNAL for 1883, I read the following:

> On page 576 of the BEE JOURNAL for 1883, I find an article by Mr. W. H. Stewart, entitled, "Shall we Clip our Queens' Wings?" at the close of which he says: "If I were offering queens for sale as superior stock, I would compel the brood mothers to fly often, even if I had to toss them up to give them a start." I wish to ask him a question to illustrate the matter in a different light. Suppose that he had a brood-mare from which he wished to rear colts noted for speed, would he consider it necessary or advisable, during foal, that she be driven at a high rate of speed, with a view of transmitting that quality to the offspring? W. N. HOWARD.
>
> Derby, Vt.

I regret that he did not put the question differently. If by the word *foal*, he means the period during gestation, I would say that I think it would be very wrong to treat the mare as some bee-keepers are treating their queens, viz: placing them in a close, dark hive, and depriving them of their organs of locomotion. To treat the mare in like manner, would be to confine her in a close, dark stable, and cut her legs off.

I hold that it would be very necessary and advisable, to drive the brood mare every day at as high speed as sound judgment would dictate, with a view of keeping her organs of locomotion in a strong and healthy condition, for the purpose that she might be able to transmit that condition to her offspring.

I know not what Mr. Howard would have me understand by the term "a high rate of speed." Some horses are able to trot a mile in much less than 3 minutes, while it would overtax and injure others to travel half as fast.

In my article on, "Shall we Clip the Queens' Wings," I stated that "overwork or excessive strain, would injure any member of the bee or other animal." If any member of a horse or bee is overtaxed, then it becomes weak and diseased; and I stated that a "condition of weakness may be transmitted to the offspring."

I do not propose to write articles for the BEE JOURNAL on the subject of breeding fast horses; but I would like to have some fast bees. In one sense, the horse-question has nothing to do with modern bee-culture; but in the sense that I infer Mr. H. intended the question, it has very much to do with it.

In my article on page 54, I stated that "I hold that all animal life is governed by the same universal law, from which there is no divorce." When we have learned that temperate labor, in any class of animals, whether running, trotting, walking or flying, is healthful, and that its tendency is the development of vigor, then we have solved the question in regard to all other classes of animals.

We often hear of brood-mares working before the plow up to within 15 minutes of the birth of their colts, and yet both mares and colts remained in good health; yet if the mares had been worked or driven to excess, both would most likely have died.

I did not state that I would compel queens to fly until their strength was exhausted, or enough to do them a physical injury; but that "I would compel them to fly often."

We often see queens fly from the combs while being handled; they are gone for a short time, and then return to their hive all right, and appear as though they had enjoyed the fly first-rate; and, as work goes on in the brood department as regularly as before, we conclude that the fly did them no injury. Birds seem to fly just as easily and safely, and seem to enjoy it just as well while they are producing eggs, as at other seasons of the year.

We have often opened the hive, after the queen and her young swarm had just left it, and we judged, from the abundance of fresh eggs found in the combs, that she has been busy depositing eggs up to the time when she started out with the swarm.

Again, when we have put the queen and the young swarm in a new hive on empty combs, the work of depositing eggs has been resumed in a few minutes, and, as the work goes briskly on, we know that the fly in swarming did her no harm. Some queens fly several times during the swarming season, and, when they leave for the woods, we find that they are able to fly long distances, and very swiftly, too.

None of us know how many times a queen with wing not clipped, leaves the hive during the warm season, for a healthful fly in the open sunshine; and we know not the pleasure and delight that they experience during those aerial excursions; nor yet do we know how important, and lasting impressions, both mental and physical, are being transmitted to the tiny egg-germs during the happy flight, because of the mental ecstasy of the mother.

Who can depict the power of mind over matter? The mind of man drives the "iron monsters across oceans and continents, and along the many rivers that thread the bosom of mother earth, and takes control of the lower forms of the animal kingdom." Who can tell what the mind of man may yet do with and for the honey bee?

I would answer Mr. Howard's question, by asking a few more questions, for the purpose of reminding him of truths with which he must already be somewhat familiar. Is he not aware that a scare, or other mental excitement of a disagreeable nature, often makes strange and woeful impressions, both mental and physical, upon the embryo, even in the human race? That certain mental conditions often make sad inroads upon our health, and at other times restore health after it is once broken? That the most successful physician is the one that has the happy faculty of approaching a sick person with a pleasing smile that awakens hope and confidence in the weak and nervous sufferer? That these manifestations are the expressions of one of nature's laws that embraces all animal life?

In his question, he "supposes that I have a brood-mare from which I wish to rear colts noted for speed, etc." Here I will "suppose" that the mare is able to travel at a "high rate of speed," and that her members of locomotion are well developed and hardened by practice; that her mental faculties have been well schooled on the race-course; that she, like many other sporting horses, is quiet and easily handled until she is led up to the well-known race-track, and hitched before a sporting sulky; that she sees and understands at that moment what is at hand, and at once becomes so excited and frantic for the match, that it requires a good horseman to control her. Every muscle becomes rigid, her ears lie back on her neck—her foaming and parted lips give you a clear view of her ivory that is violently grinding at the curbing steel between it; both front feet high in the air, and her nostrils wide distended. I will suppose that she is pregnant, and I will allow her to enter the match for a short distance, and often repeat the operation during gestation, being careful not to allow her to overdo at any time. I hold that it is not the "high rate of speed" that would be likely to injure her, or the colt; but compelling her to continue that speed until her strength was exhausted, would be dangerous to both.

Do you ask why I would thus treat the brood-mare? I answer that "it is a well known fact, that when any faculty of an animal becomes excited, that excitement prompts an extra flow of the best blood to a corresponding member. That blood makes an extra deposit of building-material with which it is laden, and the result is an extra development of that member. In thus exciting the faculties, and developing the members of the mother, a corresponding work is at the same time going on in the embryo.

In the production of colts, bees, or anything else that has life, the parents *reproduce themselves*, and neither the mental or physical condition of the offspring, at birth, can in any way exceed the combined conditions of the parents. All further development must be made by a process of growth of the offspring after its birth. Imprisonment comes not of the race in common; it is confined to favored individuals. Those individuals may, under favorable circumstances, transmit that individual growth or improved condition.

I hold that it is "advisable and necessary," that we excite the desirable qualities or faculties of the brood-mother, for the reason that, by so doing, we are all the while building up, through the mother, the desired capabilities in the offspring; and I also hold that, under proper treatment, the possibilities of improvement of the animal kingdom, are unbounded.

Who can depict the coming speed,
Of coming bee, or coming steed?
With nerve to outstrip the iron horse,
And vie with the whirlwind round the course.

'Tis man that builds the iron steed,
His limited wisdom, means limited speed;
Infinite wisdom provides the nerves,
Adapted to the age it serves.

In balance nice, weigh nature's law,
Of growth and fitness 'gainst a straw;
Read on your standard when you're done,
What e're ends well, was well begun.

Orion, Wis.

Northwestern Ohio Convention.

The Northwestern Ohio Bee-Keepers' Association met at the residence of S. H. Bolton, in Hancock county, O., on May 9, 1884.

The meeting was called to order by the President, Jacob Ginsinger; and as the meeting was for the study of practical work in the apiary, the committee on programme announced the following as the order of business: 1. Transferring bees. The first colony to be transferred by Mr. Frank Eaton; the second colony, by the President, and the third, by any one wishing to do it; 2. forming nuclei; 3. introducing queens.

All then adjourned to Mr. Bolton's apiary (containing 52 colonies) and, Mr. Eaton being absent, Mr. Ginsinger, with the necessary implements, transferred a colony from a box hive, in a short time. Mr. Eaton then came and did the same, making a neat job.

Adjourned until afternoon.

After dinner all took a view of Mr. Ginsinger's apiary, which consists of some 30 or 40 colonies, and is in fine condition. All then returned to Mr. Bolton's and the third colony was transferred in about 15 minutes.

The remainder of the programme was completed after which the convention proceeded to fix the time and place for holding the next meeting, and on motion, the time was fixed for July 25, 1884, at Ottawa, O.

On motion S. P. Weaver, Jacob Ginsinger and F. M. Blakeman were appointed a committee to arrange a programme for next meeting.

On motion the following resolution was adopted: *Resolved*, That any lady or gentleman may become a member of this Association, by furnishing the Secretary with his or her post-office address, and paying such sum as may be fixed upon by the Association.

On motion the fee for admission and annual dues was fixed at 25 cents.

J. H. Smith was elected Treasurer.

A vote of thanks was tendered Messrs. Bolton and Ginsinger, and their wives, for their kindness and hospitality manifested during the day.

Adjourned to meet at Ottawa, O., July 25. F. M. BLAKEMAN, *Sec.*

For the American Bee Journal.

Reversible Frames.

OSCAR F. BLEDSOE.

All valuable improvements in every department of civilization have arisen from suggestions to the minds of men who work and think at the same time. To work without thought leads to no progress; to think without work leads to vague and valueless theories; but to think and work, leads to progress.

After various suggestions, I hit upon a device by which all wood frames can be reversed at pleasure without manipulating a fixture or attachment; and now I am making all my new hives with reversible frames. About April 1, I hived a first swarm on reversible frames, which now has the brood-nest full of nice all-worker combs, and one set of section-boxes about ready to take off.

For starters on my frames, I use strips of worker comb fastened on with equal parts of rosin and wax melted. If the rosin is not put in, a heavy colony will pull off the starters. After a colony has nearly filled the frames with comb, I put starters on the bottom bar, reverse the frame, and soon have it solid with worker comb. If there is too much drone comb it should be cut out and replaced by worker comb. If the frames are very nearly filled with comb, I reverse them without putting in any starters.

Now for the advantages of reversible frames, which are very many. You can get the frames entirely full of comb, if *not* reversed; but bees seldom attach comb to the bottom bar. You can force the bees to carry honey from the brood-chamber to the sections above. Instinct teaches them to remove the honey as far from the entrance and bottom of the hive as possible. By reversing the frames you put the honey at the bottom; and as brood occupies what is then the top of the frame, the bees are compelled to go above the frame into the sections with their honey.

With reversible frames no complaint will be made of the industrious Italians not working in boxes; the brood not being depleted of too much honey thus easily without extracting, and in such a way that the same cells will not again be filled; and the queen can be kept busy in the center of the hive and will not be tempted so strongly to go above or to the sides to deposit eggs; hence division-boards, at the sides, can be done away with.

All division-boards and fixtures in a hive which prevent a continuous communication between all parts of the hive are a disadvantage. There should be no stoppage possible to avoid, between the brood-nest, storage, and comb-building room, at the sides and above. Reversible frames help to realize this ideal by giving the queen full employment without confinement.

Grenada, Miss,

For the American Bee Journal.

Facts Regarding Sweet Clover.

DR. W. G. PHELPS.

In common with many bee-keepers, I have taken a lively interest in the propagation of that excellent honey-producing plant—sweet clover; and my experience may be of some value to the readers of the BEE JOURNAL.

In the spring of 1883, I had upon my place a patch of rye, sown the fall previous, with the intention of utilizing it for soiling purposes, or to turn under as a green manure. It flourished so well, however, that for various reasons I concluded to harvest it. This was about the last of May, and, according to general opinion, too late to sow thereon any of the many varieties of clover, and particularly the melilot; but sow it I did, even though the ground was dry, after which I harrowed it lightly.

The results, contrary to my expectations, was all that could be desired, proving conclusively that sweet clover seed will germinate freely, without being subjected to the action of frost, as commonly believed.

Furthermore, in less than 2 months from the time of sowing, after harvesting rye, the clover furnished a pasture for stock which they much preferred to any other. They would leave luxuriant red clover, to nibble at melilot.

In regard to sowing, the following extract by Mr. H. W. Garrett, of

Coeyman's Hollow, N. Y., will be of interest:

"That sweet-clover seed needs the actions of frost upon it, I do not believe; for it will germinate much quicker than red clover. Having had a long experience with the two, I can speak from personal observations.

It is common to let red clover, cut for seed, remain on the lot a long time before threshing it, and there is no danger of the seed germinating; while sweet clover, if left on the ground and rained on, will frequently sprout when in close contact with the earth, or in thick bunches where the sun cannot penetrate and dry it out.

Sweet-clover seed being retained in its hull, holds moisture when sown, and will therefore quickly germinate. I would advise sowing it when all danger of frost is past. As a honey-plant for all seasons, wet and dry, it has no equal."

One of the objects of this article, is to make apparent the fact, not comprehended by many, that the present is the most propitious season for seeding "the waste places" with this desirable plant. If it be the "noxious weed" the unthinking have called it, give me more of it.

It stands on the patch referred to as sown last season, at least 4 inches higher than the red clover adjoining it, though the latter occupies much richer soil. Being eaten so readily by all kinds of stock in the green state, I believe it will make most delicious provender when cured as hay.

Last, but not least, I look to it as a most acceptable foraging ground for my bees, when other sources fail. With this fact in view, I have sown over 10 lbs. this season, in vacant places and on the highways; feeling that as "bread cast upon the waters, it shall return to me after many days."

Galena, Md.

For the American Bee Journal.

Packing, Feeding, Wintering, etc.

W. C. LESTER.

I use Root's chaff hive and Langstroth frames, and usually commence packing my bees on Nov. 1, or earlier if the weather becomes cool. I examine each colony to see how well they are supplied with stores, and if each has from 20 to 25 lbs. of honey, and ⅔ sealed stores, I consider it in favorable condition for packing. Colonies that have not enough stores, I feed granulated sugar syrup, and prepare them the same as Mr. G. M. Doolittle explains on page 479, BEE JOURNAL for 1883.

I use cake-tins, 4x4x13 inches, for feeders; and one or more can be used in the same hive by placing them on top of each other. I take about half a handful of rye straw—cut it off the right length to fit inside of the feeder. I then pour the syrup into the feeder, and put straw in it on top of the syrup, this being a foothold for the bees while getting the syrup.

I place the feeder on the bottom-board of the hive, side of the combs; in this way the bees have free access to the feeder, and empty it quicker than any other I have used.

I winter my bees on from 6 to 9 combs, or less if they cannot cover them, and use one or more chaff-division boards if needed, to occupy vacant space in the brood chamber. I prefer burlap or any other porous meterial, to enamelled cloth. I have used ticking successfully, before covering the frames. I use a block of wood or any small piece, or wood that forms a bridge over the top of the frames, after laying the burlap over it. I then fill the upper story with forest leaves. I have used chaff with ⅔ cut straw, but I prefer forest leaves to any other packing I have used.

Having noticed considerable in the BEE JOURNAL in regard to the "pollen theory," I concluded to test it on a small scale, by taking 3 colonies of bees, one of blacks, one of hybrids, and one of Italians. I took all their stores from them, and, selecting such combs as had no pollen and entirely empty, I gave as many of them to the 3 colonies as they could occupy. I fed them nothing but granulated sugar syrup, and as much as they could store into the combs constantly, and then prepared them the same for winter as I did my other colonies.

On page 593, BEE JOURNAL for 1883, L. C. Johnson, M. D., speaks of the qualities of the different races of bees.

Taking all into consideration, as near as I can learn, the Italians possess as good qualities as any other race; but I do not think it advisable to cross the Italians with 3 or 4 different races. Nor do I think it advisable to mate them purely, except for breeding purposes, and then breed queens and drones from the very best queens.

I prefer a cross between the Italians and brown bees. My experience with them for the past 3 years, proves to me that they can store as much honey, either comb or extracted, as any other hybrids.

Washington Hollow, N. Y.

For the American Bee Journal.

Concerning Thermometers.

JOHN PHIN.

I reply as follows to Mr. R. E. Knapp's questions on page 172:

Ques. 1. "Does extreme heat or cold cause the mercury or spirit thermometers to incorrectly register degrees of temperature?" All thermometers when near the limit of their range, give irregular and uncertain indications. The limits for mercury are 35° below zero, and about 500° above zero. It is true that the indications are pretty nearly accurate at all ordinary temperatures; and perhaps the extremes of Mr. K.'s thermometer do not extend as far as the figures I have given.

A spirit thermometer has greater range below zero, but not so great above. Spirit thermometers are never used for temperatures higher than summer heat, but they afford the only convenient means of measuring temperature below the freezing point of mercury. Pure alcohol does not freeze at any natural temperature, but its indications become irregular.

Capt. Parry in his Arctic voyages observed differences of 18° between alcohol thermometers of the best makers; and similar facts were noted by Franklin and Kane. But the extremes to which these investigators exposed their thermometers, were greater than any that will be found in the climatic conditions to which we are exposed; and here, therefore, I may answer the 4th question. I say that except for temperature lower than 36° Fahr. below zero, the mercury thermometer will be found the most reliable.

Ques. 2. "Will a thermometer which registers incorrectly by the ice-test, run uniformly up and down the scale the same number of degrees that it varies?" This will depend upon circumstances. The error of the thermometer may be due to a change in the size of the bulb (due to a molecular change in the glass); and in this case the error will not remain the same; *i. e.*, we can not make a perfect correction by simply adding or subtracting a certain number of degrees; but if the theremometer tube were kept for a year or two after being filled it would then probably change as much as it ever would, and any error must be due to the displacement of the scale, or to bad original workmanship. If to a displacement of the scale, all we have to do is to add or subtract the known error as may be necessary. Bad workmanship can not be easily corrected; the only way would be to compare the thermometer with a standard instrument, and note the error at every 10°.

Ques. 3. "Will an old-tested thermometer, say 10 years old, mark the degrees as perfectly as a newly-tested one?" Thermometers which are exposed to great extremes of temperature may change somewhat even after the second year, but not to any great extent. Therefore, I should say, that a thermometer which had been tested when two years old, might be relied upon ever after in all ordinary work. This, however depends somewhat on the glass that is used, but it is true in most cases. For *extremely* accurate work thermometers should be tested every 3 or 6 months.

I may add that the variations of which I have been speaking are comparatively slight, and are nothing when compared with the ordinary errors of observation. In common thermometers the chief source of error lies in the bore of the tube. A thermometer may be perfectly accurate at the principal fixed points (32° and 212° above zero), and yet show great errors between them. The only really correct thermometer is the air-thermometer as used by Regnault; but this instrument can not be used by those who have not the conveniences of a large laboratory.

To sum up the whole matter: A good mercury thermometer which is over two years old, and which is correct at 32° and 212° above zero, (the freezing and the boiling points of water) may be depended upon for all the ordinary requirements of life, and it will not deteriorate by any ordinary usage or exposure.

Patterson, N. J., April 15, 1884.

Local Convention Directory.

1884. *Time and place of Meeting.*

June 6.—Mahoning Valley, at Newton Falls, O.
B. W. Turner, Sec.

June 19.—Northern Mich. at Ionia.
F. A. Palmer, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Good Results.

I have 66 colonies which are doing well. Last year my bees produced 7,600 lbs. of honey, and over 100 lbs. of wax. Mrs. C. M. Kingsley.
Elvaston, Ill., May 15, 1884.

Are Bees Taxable in Illinois?

The assessor attempted to assess my bees, but I do not think it is lawful to assess farmer's bees. This is the first time it has ever been tried here. I believe it would be a great favor to bee-keepers generally, to have this determined. A. Wicherts.
Matteson, Ill., May 16, 1884.

[In this State it is by law made the duty of the assessor to "list" colonies of bees, as is shown by the published quarterly reports. That they are taxable in Illinois, we think does not admit of a doubt.—Ed.]

Bees in Eastern Ohio.

Bees in this locality wintered moderately well so far as I have been able to ascertain. One apiarist put 15 young colonies into a vault last fall and this spring 8 of them were alive. Another apiarist lost 12 colonies out of 44. Last spring I began the season with 10 colonies in fair condition. I stimulated them by feeding them sugar-syrup until they could get their own living. It being a very poor season for honey, they did not gather very much surplus honey, and what they did gather I saved for feeding them this spring, if needed. Two colonies swarmed, one left and the other died late in the fall, thus leaving only 10 colonies. On March 24, I examined all of them and found 1 dead, and the rest in good condition; yet I gave each of them a comb of honey. They all contained brood at this time. The weather set in cold again, and I did not look at them until April 11, and I found 8 doing well, and for some cause the other was dead. I did not feed them very long. On May 11, a swarm issued and I put it into a hive with 8 nice combs. I looked at them May 15, and found new honey in 6 combs, and 2 with eggs in. R.
Barnesville, O., May 16, 1884.

Women as Apiarists.

My bees wintered well. All came out strong and healthy. I have sold 50 colonies this spring. I cannot help thinking that bee-culture is a good occupation for women. I attend to my bees without the assistance of any one, except the supply dealers; for in these progressive times one can buy everything pertaining to the bee-business, all nicely prepared and ready for use. That alone is enough to tempt one into the business; and truly, I keep bees as much for pleasure as for profit, and have lots of spare time, too, for other work. I am sure if I were compelled to earn my own support, there are few pleasanter occupations in which an intelligent woman could engage.
Mrs. Dr. E. H. Mason.
Vincennes, Ind., May 16, 1884.

Bees Storing Honey Rapidly.

Since I have kept bees I never saw them gather so much honey from fruit bloom as they have this year. Each colony has gained in weight from 10 to 15 lbs. All my colonies are now crowded with bees and brood. They are in the best possible condition for the clover bloom, which will be here soon. I expect some swarms in a short time. H. T. Hartman.
Freeport, Ill., May 20, 1884.

Botanical.

Enclosed I send a plant which is very abundant here, and much used by bees. What is its botanical name? and its value as a honey plant? We have had a remarkably wet spring, and vegetation is unusually vigorous and dense with an endless variety and quantity of flowers. Notwithstanding much of the weather has been quite cool for the season and climate, bees are doing exceedingly well, and are very prolific in swarms.
W. P. Hancock.
Salado, Tex., May 7, 1884.

[It is *Gaura filipes*. It belongs to the Evening Primrose family, most species of which yield nectar.—T. J. Burrill.]

Bees along the Pacific Coast.

This spring has been the warmest and finest I have known in Oregon during my 32 years' residence. Bees have been doing better than ever before. I took out, for the first time since being a bee-keeper, comb honey made of the peach, pear, cherry, and plum bloom in the month of April. Some bees in smaller hives swarmed during April. We never had better prospects for a good honey crop; other crops also look well. I have quite a lot of fertilized young queens at my Washington Ter. apiary. I must here mention in connection with the rearing of young queens, that Oregon possesses what perhaps none of the Eastern States do; and that is such a wonderful bee-man as a queen-bee surgeon, accoucheur, and midwife. This medical or surgical queen-bee genius, claims that he played the part of an accoucheur surgeon and midwife for one of his queen-bees, which after fertilization, would not lay the first egg. He did not apply browned butter like is done to young bees, but performed a surgical operation with the point of a very fine needle. He said the operation proved a success, and the mother and her egg lived and are doing well. Who of you Eastern queen-breeders can come up to that? Would it not be well for all the Eastern queen-breeders, as a whole, to engage this man's valuable services, as they are wasted here in Oregon, where apiculture is carried on in all kinds of boxes, and even in sugar and nail kegs. We have also a farmer who every year kills his old colonies of bees to obtain the honey. The old man thought that the old way of killing the bees was the best, and did not know he was killing his young queens in the old colonies. He has now learned his mistake—transferred his bees in movable-comb hives, and will no longer murder his young queens for honey in old combs. As the Pacific coast has never yet done anything for progressive apiculture with regard to introducing new varieties of bees, I have come to the conclusion to try introducing bees from China by the mail steamers via Japan. I believe the trip requires about 25 days, and I have found acquaintances who think it can be done through our former American Consul, who is now a resident of the city again, and is said to be a very obliging man. I shall let you know more about the prospects of the China bee in due time. Gust Murhard.
Portland, Oreg., May 10, 1884.

Dandelions and White Clover.

My 50 colonies of bees were never in as good condition before fruit bloom, as they are now. One colony is storing surplus honey. The roadsides are yellow with dandelions, and the white clover heads begin to appear. The apple trees will bloom this week if the weather is fair. Prospects for a good honey crop in this vicinity, was never better than now. Geo. E. Hilton.
Fremont, Mich., May 19, 1884.

How my Bees Wintered.

Last fall I had 38 colonies and one nucleus. The 38 came through the winter in splendid condition. I always winter my bees on the summer stands, and they can eat pollen if they wish. F. J. Sawin.
Kirkwood, Ill., May 15, 1884.

Weather Unfavorable for Bees.

I hope the readers of the Bee Journal are having a better spring for bees than we are having here in central New York. The last 2 weeks have been cold and wet; in fact, the whole spring has generally been cold, so that with the exception of a few strong colonies, bees are mostly weak. Many of my colonies are not nearly so good as they were April 1, and this but echoes what I hear from all bee-keepers near me. High winds, rain, and frosts is the order of the day here.

G. M. DOOLITTLE.
Borodino, N. Y., May 17, 1884.

Still Room for more.

We have had a very late, wet and cold spring. Swarming is about two weeks later than it was last year. The prospect is good for an abundant honey crop. Apiaries are becoming very numerous in this part of the county. There are plenty of sage and other plants here, thus making it a good place for bees. Hundreds of acres of unoccupied land well adapted to bee-culture, can be found here.

JOHN L. SECOR.
Monterey, Cal., May 4, 1884.

Not One Colony Lost.

Last fall I had 17 colonies. I put 15 of them (12 strong and 3 weak) into my new bee-house, and the remaining two were left on the summer stands, and the latter, I think, will soon swarm. The three weak ones came out with more bees than when put in. I have had to feed them some, and I expect a good harvest. My bees consumed from 10 to 19 lbs. per colony, during the winter. B. E. FOSTER.
Utica, N. Y.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Introducing Fertilized Queens.

1. What is the best method of introducing a fertilized queen into a colony which has cast a swarm?

2. Ought a queen to be introduced into a colony as soon as the swarm is gone?

3. I know of parties who extract all the honey from the brood-chamber once a week, in the forepart of the honey harvest, and let the bees fill it up again with fall honey, for winter stores. Do you approve of such a course?

4. Is it not better to let the brood-combs alone? C. UPTON.
Fenwick, Mich., May 10, 1884.

ANSWERS.—1. Cut out all the queen cells, and put the new queen in a cage between the combs, and leave her there for 24 hours, then if no balling of the cage is going on, liberate her. Many of us have been successful by daubing the new queen with honey, and smoking her in at the entrance.

2. I should never introduce a valuable queen to such a colony. They are less apt to be received in such an one. The idea that the colony should not remain queenless any time after the swarm leaves, without great loss, is only another of the mistakes of theorists.

3. I feel just as safe in wintering bees with fall honey, as with that from clover and basswood.

4. Yes; it is better to use 2 stories, and extract from the upper one almost exclusively; not because it injures the bees, or the chances of wintering them to extract honey out of the brood chamber, but because it is less trouble.

Questions About Queens.

1. When a first swarm issues, Mr. Heddon says that the queen is about a year old. How old is the queen which is left with the colony?

2. How old is the queen which goes with the swarm that issues from the first swarm? Is it the one which issued with the first swarm?

3. Does the oldest or youngest queen issue with the swarm.

4. Does one queen remain in the same colony until she is removed?

Please do not refer to back numbers.

S. F. D.

ANSWERS.—1. The queen which is left with the colony is not yet out of the cell, nor does she usually emerge till about 8 days after the swarm issues.

2. Yes; it is the one that issued with the first swarm.

3. The oldest one.

4. No; they change every time a prime swarm is cast. About the 4th or 5th year of a queen's life, she loses her fertility, and is superseded by a young one reared by the bees to take her place. Sometimes we find both old and young queens in the hive together; the old one seemingly tolerated there out of respect for what worth she "has been." This may be used as a moral lesson.

Disabled Queen.

Did you ever know a good queen to become disabled all at once, and not have a cell of brood in the hive, and the bees still retain her?

WM. MALONE.
Oakley, Iowa, May 7, 1884.

ANSWER.—Yes; and I have never been able to learn the real cause. A bee is a small insect, and what are no doubt simple physiological facts when we understand them, are enigmas to the general honey-producer. Such men as Prof. Cook are the ones who know most about such matters.

◆

☞ The members and friends of the Northern Michigan Bee-Keepers' Society, will hold a basket picnic at the apiary of Miss F. A. Bellamy, one mile west of Ionia, on June 19. Teams will be in waiting to convey, free of expense, all who wish to attend. Purchase your tickets to Ionia, but leave the cars opposite the prison grounds. Miss B. requests that you bring your wife or husband, as the case may be, and also that you drop her a postal, notifying her of your intention to be present, in order that ample provision may be made to convey all from the trains. Come on the morning train and return in the afternoon. F. A. PALMER, *Sec.*
S. J. YOUNGMAN, *Pres.*

☞ The Mahoning Valley Bee-Keepers' Association will hold its next meeting at Newton Falls, O., on June 6, 1884. It is desired that a display of apiarian supplies and samples of honey be made at that time. Mr. Hammon, of Bristolville, and Mr. C. R. Page, of Streetsborough, will read practical essays on topics pertaining to bee-keeping.

E. W. TURNER, *Sec.*
L. CARSON, *Pres.*

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 26, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. CHAS. F. MUTH.

NEW YORK.

HONEY—The prospects are that but little honey will be carried over, and that will all be in 2-lb. sections. More one-pounds should be produced for this market. We quote:

Fancy white in 1-lb. sections, packed in clean crates, 16@17c; 2-lb. 13@15c. Fair to good white, 11@14c; dark, 10@13c. Extracted, 8@9c.

BEESWAX—Scarce, 36@38c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—Demand light. 1 lb. sections comb honey, 18@20c.; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—Choice white comb honey in 1 lb. sections brings 18c; in 1¼ to 2 lb. sections, quotable at 16c. Comb honey discolored and in undesirable shape is selling at 10@12c. Extracted honey is in light demand at 6@8c. Manufacturers of syrups and bakers say that the low price of sugar is the reason why they do not use as much honey as formerly. There is very little desirable comb honey on the market.

BEESWAX—Is scarce and fancy yellow brings 38c. Poor beeswax, but dark, and having more or less of dregs or refuse matter in it, quotable at 30@33c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—This market is almost wholly nominal., and will probably continue so for at least a fortnight, when new honey will be due. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—No perceptible change in the demand for choice white comb 1 and 2-lb. sections, at 15@16c; but dark and irregular comb, or even choice comb in any but clean, neat and uniform packages, goes begging at 10@12c. Extracted, quiet and in good supply, nominal at 7@8½c.

BEESWAX—Small lot sold to-day at 35c. None to speak of in the market.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8½c.

GEO. W. MEADE & CO., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Convention Hand-Book.

This is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

◆

☞ It is extravagant economy to delay ordering hives, sections, foundation, etc., till the last moment, or till they are needed for use; for frequently a dealer finds it impossible to fill orders promptly when they are all held back till the last moment. Then, in the rush, many are disappointed. Therefore we would say to all, order early, and save yourselves much vexation and disappointment.

◆

Advertisers' Opinion.

My advertisement in the BEE JOURNAL, has brought me over 400 responses. DR. G. L. TINKER.
New Philadelphia, O.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.
E. A. THOMAS & Co.
Colerain, Mass., July 18, 1883.

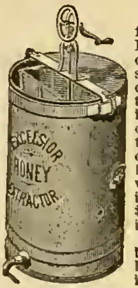
Having advertised in the AMERICAN BEE JOURNAL quite extensively for the past two years, I would say (without solicitation) that it has sold more queens for me than any other three periodicals I have ever tried.

My bees are in fine condition this spring. I have lost but 4 out of 182 colonies. The outlook is fine for a good season. L. J. DIEHL.
Butler, Ind., May 7, 1884.

◆

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

EXCELSIOR
HONEY EXTRACTORS

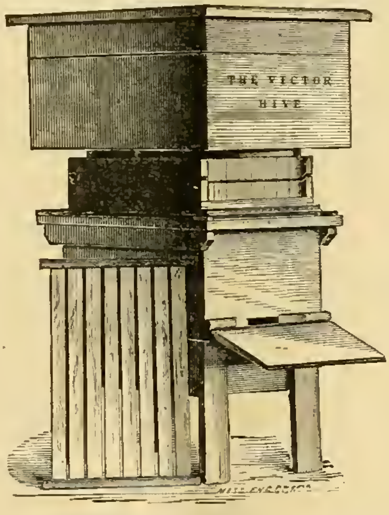


In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	13x20	"	12 00
For 4 " "	13x20	"	16 00

ALFRED H. NEWMAN,
923 West Madison Street. Chicago, Ill.



It may be arranged for any form of the Langstroth Frame; has been fairly tested, and is the **Best Hive** made for Comb Honey. Send for new Circular.

Address, **DR. G. L. TINKER,**
44Atf NEW PHILADELPHIA, O.

SECOND TO NONE!—ITALIAN Queens and Nuclei. For prices see advertisement for April 30th.
W. C. LESTER, Washington Hollow, N. Y.
21A4t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

65 *ENGRAVINGS*
THE HORSE,
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

DR. FOOTE'S
HAND BOOK OF HEALTH,
HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

NEW AND USEFUL
Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

ELECTROTYPES

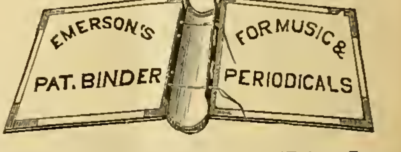
Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

BIND YOUR JOURNALS
AND KEEP THEM
NEAT and CLEAN.



The Emerson Binder
IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder

For Monthly Bee Journal	**50c.**
For Weekly Bee Journal	**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

CHEAP! CHEAP!

Full Colonies. Nuclei and Italian Queens. Send for Price List before buying elsewhere.
DAN. WHITE, New London, Ohio.
18A5t 5B1t

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.
Price, 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

Sixth Thousand Just Published!

New and Enlarged Edition

OF

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

E. T. LEWIS & CO., Toledo, O.,

MANUFACTURERS OF

All kinds of **Apiarian Supplies.** Special rates to Dealers. Send for Circular. 14Atf

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AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

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Bees, Hives, Extractors, Smokers, Dadant Foundation, and other Supplies. ARTHUR TODD, Germantown, Philadelphia, Pa. 19A5t

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ITALIAN QUEENS, DADANT FOUNdation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY,** Wenham, Mass.

BinghamSmoker

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,
G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

The Eureka Wiring Tool

For pressing wire into Foundation. **Price, by mail, 50 cents.** Send for Circulars. FOUNDATION and EXTRACTORS for sale.
17Atf **C. M. RULAND, Rockton, Ill.**

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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ITALIAN BEES

AT BED ROCK PRICES.

COLONIES—8 Langstroth Frames, in light shipping box	$ 4.50
8 Thomas Frames, in light shipping box	3.00
NUCLEI—2 or more, 2 frame, with tested queen	2.00
2 or more, 2 frame, with untested queen	1.50
QUEENS—Tested, by mail	2.00
Untested, by mail	1.00

After June 1st, 25 per cent. off.

After June 1, tested, per dozen	12.00
After June 1, untested, per dozen	9.00

Reared from Imported or Selected home-bred Mothers. No Foul Brood ever known here. Address, **C. WEEKS,**
17A8t CLIFTON, Wayne Co., TENN.

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

STANLEY'S

Automatic Honey Extractor

AND SMOKER.

Send for descriptive Circular and Prices to

G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

Early Spring! Order Now!

To introduce my Italian Queens, I will send one of my Tested Queens, if ordered before May 20th, for $2. Warranted Queens, $1. Send $2 and less, in common letters, at my risk. **E. P. BAKER.**
10A11t Box 342, DES MOINES, IOWA.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid ... in May and June, each	$ .50
Italian—untested—not warranted, in May and June, each	1.00
Italian—warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

1868. 1884.

HEDDON'S
COLUMN.

BEST GIVEN
COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey........................	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat....................	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

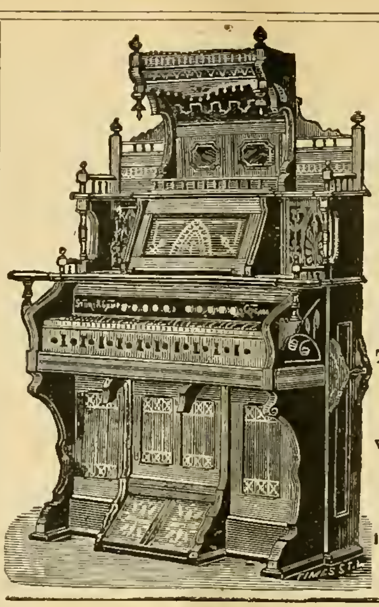
Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.
Address,
JAMES HEDDON,
DOWAGIAC, Cass County, MICH.



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros., Haines Bros., Mathushek, Simpson & Co., Story & Camp.	Estey, Story & Camp. The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street,	203 N. Fifth Street,
CHICAGO.	ST. LOUIS.

NEW Vegetables
A Specialty.
GREGORY'S
SEED
CATALOGUE.
1854.-1884

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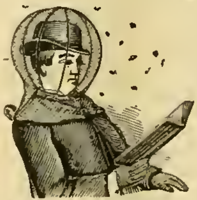

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ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago. Ill.. June 2, 1884.

VOL. XX.—No. 23.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS C. NEWMAN,
EDITOR AND PROPRIETOR,
925 WEST MADISON ST., CHICAGO, ILL.
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THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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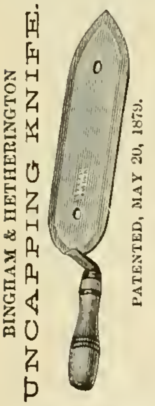
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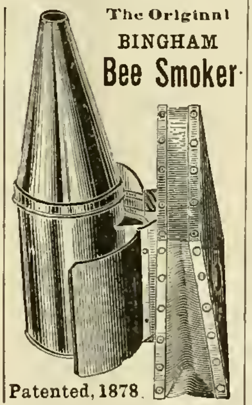

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THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JUNE 2, 1884. No. 23.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

National Experimental Stations.

By our exchanges we notice that there is a bill now before Congress providing for the establishment of National Experiment Stations in connection with the agricultural colleges of the different States. This bill appropriates $15,000 to each State agricultural college, for the purpose of "conducting original researches or to verify reported experiments on the physiology of plants and animals, the diseases to which they are severally subject, and with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation within the isothermal limits represented by the climate of the several stations and their vicinity; the analyses of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative values for raising crops of different kinds; the composition and digestibility of the different kinds of food for cattle; the scientific and economic questions in the production of butter and cheese; and all other researches of experiments bearing directly on the agricultural industry of the United States."

The bill further provides that the management of the stations shall be in the hands of the trustees of the several colleges, one of whose professors shall be appointed superintendent, and such other assistance is provided for as may be needed. The State accepting the money from the National Government shall agree to establish and conduct such station as is provided for. It is to be hoped the bill will become a law.

Prospects for Honey Crop in England

From the *London Journal of Horticulture* we learn the following concerning the prospects for a honey crop in England:

> The cold dreary days and long nights of winter are over, and the warm breath of spring is felt. Bees begin to stir themselves, casting aside, with unmistakable vigor, the inactivity which has through a wise rule of Nature kept our bees in the warm shelter of the hive, when to venture forth would mean certain death to them. We have now, however, reached a season of great activity among bees, and usually the enthusiasm and energy visible about every healthy colony is communicated to its owner, and displays itself in the increased interest taken in the bee-corner of the garden.
>
> The mortality of bees the past winter has been much below the average; for, except in cases of absolute starvation, very few colonies, so far as we can learn, have perished. There has been an immense show of bloom on fruit trees of all kinds, and whenever the leaden clouds which have so persistently excluded the sun's rays for a great portion of the month, allowed the warmth to be felt, it has been very cheering to bee-keepers to note how plentifully both honey and pollen could be gathered. Judging from a careful examination of our own colonies, and taking things altogether, we think the prospects of bee-culture are very promising for a really good season.

Foul Brood.—On pages 291 and 292 we gave space to a statement from each side of the controversy about Foul Brood between the Nebraska Convention and Mr. Flanagan, and having done so, we said we "could not consent to burden our columns with any arguments *pro* or *con*." President Von Dorn has sent us a response denying the statements of Mr. Flanagan, but we have concluded to let the matter rest where it is, so far as the BEE JOURNAL is concerned; for if we re-open the controversy, there will be no good place to break it off. One statement from each side is all that can be reasonably expected of us. We would like to see an amicable adjustment of the whole matter.

Deep Cells in Foundation.

It had long been wished for, but so far had baffled the skill of man to make anything akin to the deep and perfect cells as made by the bees in their combs; but to-day Mr. E. B. Weed placed a sample of comb foundation on our desk, in which the cells are the deepest we ever saw. It is made with wood base, and the wax is pressed into the shape of cells on both sides by very powerful machinery—in the sample we have, the cells are *over* ⅛ of an inch deep, by measure.

As this is something really new, we will here state the principal advantages claimed by Mr. Weed:

1. It cannot possibly sag, melt down or break down, no matter how many bees are clustered upon it, or what treatment it receives in shipment or extracting. Swarms can be placed on it with impunity. This advantage can hardly be over-estimated in swarming time.

2. The great height of side-wall insures acceptance by the bees, when ordinary foundation would not be noticed.

3. No wax is wasted in the base; no wire is used; there are no holes to punch in the frame and sew wire into; a much smaller quantity of wax can be used, ten feet to the pound, making a very good side-wall.

It has been demonstrated in every apiary that wood is the only substance to which bees will attach their combs without objection; but heretofore the inflexible nature of the material has proven an insurmountable difficulty in the way of its use for the base of the honey-comb. This difficulty is now overcome by the use of powerful machinery that moulds the wood to the proper shape, without splitting or breaking it. The wood is prepared so that moisture can have no effect on it.

Whether this is a success or not, Mr. Weed is entitled to much credit for his inventive development.

CORRESPONDENCE

For the American Bee Journal.

Loss of Bees in Bee-Cellars.

G. M. DOOLITTLE.

When I first began to keep bees, I always wintered them in the cellar, and for the first few years wintered them without the loss of a single colony; but when I came to increase them so that from 40 to 80 colonies were put into the same cellar, where at first I had only from 5 to 20 colonies, I began to lose, and after quite heavy losses, I gave up cellar wintering, and wintered my bees out-of-doors entirely.

The trouble seemed to be that with a large number of colonies in the same cellar, the temperature could not be kept down when there came a warm time of any length in the winter. During such a time the thermometer would often mark 50° to 60° in the cellar, which increase of temperature would cause the bees to leave the hives in large numbers, while their disquietude only caused the mercury to rise still higher, thus making matters still worse, resulting in heavy losses.

The first two or three winters after I had decided to winter out-of-doors, proved favorable for such wintering; but one spring, when I found that I had only 40 colonies left out of 130 which I had put into winter quarters, I again began to think of cellar wintering.

About this time Mr. James Heddon wrote an essay for the Northeastern Bee-Keepers' Convention, which I heard read, and in which he said that if we could keep the temperature around our bees the same as that found at 5 feet below the surface of the ground, they would pass the winter in safety, if there were sufficient stores in the hive, and a goodly cluster of bees. This may not be the exact wording of the essay, as I quote from memory; but the substance is nearly, if not quite, correct.

The idea impressed me favorably, and the next fall, when I moved to my present location, I dug a cellar in a side-hill on purpose to meet the very requirements Mr. Heddon advised. As this cellar has been described in the BEE JOURNAL, I will not give another description of it, except to say that its average depth is 7 feet below the surface of the earth; and that to keep the outside air from influencing the inside temperature, there are three doors at the entrance, which give two dead-air spaces of 2 feet each between the doors.

Into this cellar I put about one-half of my bees each year, and have used it thus for the past seven winters with uniformly good success till the past winter, which proved Mr. H.'s idea of a bee-cellar to be a good one. The temperature of this cellar would be 50° when the bees were first put in, owing to the bees raising the temperature by the disturbance resulting from moving them in; but it gradually lowered till at the end of three weeks it was at 42°, where it remained the rest of the winter, no matter whether it was 27° below or 60° above zero outside.

The walls of the cellar would be quite damp during all the latter part of the winter, and the dead bees scattered on the cellar bottom would get moldy and emit a bad smell unless swept up often; but this did not seem to effect the live bees in any way, as all full colonies were generally sure to come out all right. By way of experiment, I put in some very small colonies or nuclei, but found that most of these would come out poor in the spring, as it seemed to be too cold for them.

When putting the bees into the cellar last fall, I began to think of the "high pressure" of temperature recommended by Ira Barber and some others, and thought, perhaps Mr. Heddon might be mistaken in his ideas, even though former winters had proved him correct. The next day, after putting the bees into the cellar, I went in to see them, and found them in a very quiet condition, with the mercury at 50° above zero. As several of the full colonies were lying on the outside of the hive, similar to the way Mr. Barber said his did, I again thought of the matter, and it seemed to me if I could keep the temperature at just 50°, they could be kept nice and quiet.

As 50° was given by L. C. Root and others as the right temperature for a cellar, and was midway between what I had formerly used, and Mr. Barber's 65° to 90°, I concluded to test the matter. So, as the mercury began to lower, three days afterward, I placed an oil-stove between the first and second doors of the bee-cellar. At first it took but a small blaze to keep the temperature as desired (50°); but as the cold outside increased, I had to increase the blaze. I soon ascertained that to keep the temperature at 50° in all parts of the cellar, it must be at 77° between the doors; and after discovering this, I only went inside of the cellar twice every month; once on the 1st, and the next on the 15th.

When I went in on Jan. 1, I found all as usual; bees all quiet, with a few colonies clustering on the outside of the hives, to some extent, with but very few dead bees on the cellar bottom. So far I had not looked at the bees at the top of the hive, and happening to think of the matter, I removed the covering from one of them, and to my surprise they were ready to fly out into the light the moment the quilt was raised; while winters before they would appear like so many dead bees, unless jarred or breathed upon. I returned to the house and told Mrs. D. that I feared I had begun a costly experiment; for in this case I was risking the whole lot of bees that was in the cellar, while all my experiments heretofore had been confined to a colony or two, and would not have been costly if the experiment had proved a failure.

In this case it was the "whole or none," and fearing it might be the "whole," I wrote to Mr. Barber asking him to tell me how he kept the temperature of his cellar so high, and what he knew of the matter. His reply showed that he knew very little of the matter at all; for he had no thermometer in his cellar except at the time the bees were put in, and again upon taking them out, when, of course, the temperature was greatly raised by the commotion of the bees, which is unavoidable at such times. He did not go into the cellar from the time the bees were put in until they were taken out, so he was entirely ignorant of what he advised others. The mercury might go down to 40° below zero and stay there the most of the winter, and he would not know it.

L. C. Root has a thermometer which passes down into the cellar through a tube so arranged that he can lower and raise it at pleasure, which gives him a knowledge of the temperature at all times. Mr. B. should do the same before he tells us of a temperature which is so misleading as is one obtained when the commotion of the bees is great enough to give a much higher temperature than really exists.

When I went into the cellar on Feb. 1, I found that the clusters on the outside of the hives had disappeared, and the dead bees on the cellar bottom were nearly an inch deep, with others on the wing adding to those already accumulated on the floor.

If I had, at this time, taken the stove out, I think I might have saved nearly all of the bees, though in a reduced condition; but I feared to do so, as it seemed to me that a lower temperature would be the ruin of them if they were not already ruined.

The middle of February showed that the mortality was still going on, while one or two colonies had all left the hives, except a dozen or two dead bees scattered among the combs. When I went in, on March 1, the full colonies were nearly all gone, while the bees were nearly 2 inches deep on the cellar bottom. The most of the nuclei were still alive, and now I resolved to take away the stove at all events. I also put out the remnant of one colony which had a choice queen, and left them out, after packing them with chaff. The mercury gradually sank after removing the stove, till on April 1 it stood at 45°, where it still stood on May 1.

Now for the result: I lost four-fifths of the full colonies and the one put out on March 1 being the best of any of them. I also lost one-fourth of the nuclei. Some few of them came through well, but the majority are weak, while there is not enough left of all the full colonies to make 2 decent ones at this season of the year.

In the above I have given the facts as I found them, so the reader may be warranted thereby to go cautiously on trying new experiments. It would have been more pleasant to have passed by this, but I feel it a duty to give my loss as well as prosperity, in the bee-business.

As to how the loss came about, probably each reader will have his own opinion. Mine is that the high temperature caused the bees to become restless, thus wearing their life out, so that by Jan. 5, they began to die of old age. As an old bee always leaves the hive to die, if the temperature will admit, so my bees left their hives, one by one, till all went out on the cellar bottom. The half of my bees left on the summer stands have come through all right, with many of them strong, while I lost but 3 out of 38, two of which starved (bees in this vicinity used an undue amount of honey last winter), while the colony from the Texan Cyprian queen had the diarrhœa and died about the middle of March.

There are two points about the cellar wintering which I wish to notice: 1. Every time the mercury sank below 10° above zero, the vapor coming from the upper ventilation pipe would be condensed so as to appear for days at a time as does the smoke coming from a chimney having a wood fire below, thus showing that the ventilation was good, and also showing what a quantity of moisture the bees are continually throwing off. This also kept the cellar somewhat dryer than usual, though the walls were somewhat damp. 2. The temperature was so warm that the moth-larvæ, which took possession of the combs from which the bees first died, came to maturity, spun their cocoons, and passed to the miller state.

I ask, is there any conditions in nature, unaided by man, which will confine bees for several months at a time in so high a temperature that moths will mature? If not, is it well for man to try to do so?

Borodino, N. Y., May 10, 1884.

For the American Bee Journal.

Which is the True Policy?

R. J. KENDALL.

Mr. Pond's article on "Priority of Location," on page 149, was evidently written to combat and censure Mr. Heddon for his article on controlling an apicultural field, on page 86.

Mr. Pond says (in effect) that Mr. Heddon is selfish in advocating such a doctrine; that priority of location gives a man no "moral right" to a locality; that bee-keepers are more indebted to amateurs in bee-culture (fancy breeders) than to the professionals; and, in fact, that the proper and humane policy is to encourage every body who can, to keep bees. I think Mr. Pond is wrong in every one of his positions, if by bee-keeping is understood the making of money from the pursuit, as opposed to keeping bees for pleasure and fancy.

Mr. Pond seems to place some stress on the difference of policy between the bee-keepers of England and those of America. He says that in England every one is encouraged to keep bees, while here the policy seems to be the opposite. The circumstances of the two cases are very different to start with; but even if they were not, what is the result of this extensive encouragement in England?

I will state here that I am an Englishman by birth, and the son of an English farmer. I was brought up in the country, and know what English country-life is, although later on I lived in London. The English agricultural laborer, who is most encouraged in the way Mr. Pond speaks of, is generally very poor, and a person to whom every little is a real help. He is a person who has from time immemorial, kept bees in skeps, and then brimstoned them to get the honey, which is strained honey at that. Surely, it needs no argument to induce such a man to handle bees without killing them, and to teach him how to produce a better quality of honey. What little he can produce in no way injures the market, as it is easily used up, either entirely by his own family, or in his immediate locality.

The honey supply of England, too, is such that the cottager can put on his surplus arrangement, and it will, as a rule, hold all the surplus honey the bees can gather during the season, and needs little or no attention, so that he can continue his daily avocation without the care of his bees trenching upon it. Then the mere possession of bees will tend to keep this class from the "public house" (saloon). But the cottager's bee-keeping in no way interferes with the professional, or this liberality would, perhaps, not be so conspicuous.

The mass of kee-keepers in England may be said to be pleasure bee-keepers, in contradistinction to professional men or specialists. Here the tendency seems to be different—to make bee-keeping a business like any other, and men devote themselves to it exclusively, more than for mere pleasure. If this be the case, it must be viewed from a different stand-point entirely; and in my opinion that stand-point is the one taken by Mr. Heddon.

Still Mr. H. offers no opposition to the idea of a man keeping a few colonies for pleasure or slight profit, who can attend to them without trenching on his business proper; and I do not understand him to object to such, but to the man who is either going to make it a business (as to priority of location), or to the man who gets a lot of bees and goes on the principle that "bees work for nothing and board themselves."

Now, in the latter case, the careless bee-keeper is capable of, and very apt to injure his specialistic neighbor very materially, by breeding any strain of bees, getting foul brood in his apiary, and in many other ways which Mr. Pond understands as well as I. Such bee-keeping is undoubtedly wrong—wrong to the bees, and wrong to his neighbor. There is no charity, humanity or kindness in encouraging such bee-keeping.

Now as to priority of claim. This can only be discussed as a question of morals. The legality of the matter cannot be touched upon; for, of course, any body who likes to keep bees can do so, and keep them any how short of actual nuisance, and the law will not stop him. In nearly every business there is more or less of what is termed (as a legal fiction) "good-will." This "good-will" is usually accorded the man who in any business gets the trade by priority of business; and it is very often sold for a considerable sum.

All over the West, and especially in Texas, where the grazing fields have been "free grass" heretofore, the shepherd or cattle raiser who first run his stock over a certain district, was universally accorded the right of priority by other "free grass" men.

Now as to bees. Suppose the case Mr. Pond puts that A. owns, say 10 acres of land, while B. owns 10,000 acres all around A. B. got his land first, and went into farming, stock raising, etc. A., on the other hand, begins to keep bees, and makes a living out of the business. B., seeing this, says to himself, "A. is making a living by grazing my fields. I'll stop this." He then purchases or breeds large apiaries to graze his own honey-field. Legally he can do so; but at the same time he destroys A.'s living. Is he doing right? Is he doing unto A. as he would like A. to do unto him? Who is the "selfish" man, A. or B.? Bear in mind that A. never began to keep bees till he saw B. was not doing so, and in so beginning he made no hostile act against B.; and it is only when B. sees that A. is making money that he thinks of keeping bees.

Why, of course, B. in acting as described toward A., does A. a great moral wrong. If B. only keeps fewer colonies of bees, he injures A. to just that extent. Has he any moral right to do so? If B. wants really to do the right thing by A., he should go to him and offer to buy his bees, giving a recompense, so that in driving him out he tries to remedy the evil a little.

Take the case Mr. Heddon puts. Suppose Jones has a location, and is running 150 or 200 colonies, and is making a living. Brown sees it, and brings into the same neighborhood 70 or 80 colonies. It is true it is a very injudicious act of Brown, but suppose he does; what is the result? Why, he lowers the Jones average and takes so much money out of Jones' pocket. What is Jones to do? Silently and quietly submit to it, be content to be injured himself, and yet see Brown injuring himself (in not doing as well as he might) also? Why, the common-sense, the humane, the true and the right policy is for Jones to take just the course Mr. Heddon points out. Go to Brown, show him how he is injuring himself and his neighbor, and how it will benefit both for each to occupy separate fields; and so settle it in a common-sense, rational way.

If Brown says, "I have as much right here as you, and shall stay," then Jones is forced to act in self-defense, and he owes it as a duty to his family to do so. The self-defense is, to increase his own apiary till he lowers the average of Brown's to such an extent that Brown quits the bee-business and goes back to his old one, or moves away. Why, in such a case, in charging Jones with being "selfish," Mr. Pond is very wrong.

As to bee-keepers being more indebted to amateurs than to professionals, Mr. Pond by no means proves his case. The instances he gives may be his side, but it does not include the results of bee-keeping, which after all is the end. What he says has full weight, but the different phases of bee-keeping, as seen on this side the Atlantic, where are the professionals, and on the other side, where are the fancy breeders or amateurs, should be evidence enough.

The amateur keeps bees as a pleasure and study, and he is comparatively careless of the market results; but the specialist is the man who most practically asks and solves the question, "Will it pay?" and "Will it pay?" is the great question to bee-keepers.

George Stephenson is the father of railways, and James Watt discovered how to utilize steam; but railroad men—steam using companies—are the men who really confer the every day benefit on the people. The discoverer and the worker are united, and to put them in opposite camps and talk of one being of more benefit than the other, and so cause jealousy and semi-hostility, is not the wisest policy by any means.

The next point is, is it wise to encourage every one to keep bees? No, decidedly not. The "blighted hopes" list is long enough already; do not increase it, as it most assuredly will be increased, if this universal encouragement is given. I believe more men who started out to make a fortune, fail to make a living by keeping bees than in any other business.

The book, "Blessed Bees," reads very pretty with its blossoms, country life, and dollars at the end. I have paid for reading it I know. How many more have, I do not know. Still I am a bee-keeper, and propose to continue as such.

That keeping bees pays decently, and only decently well when properly kept, may doubtless be true. So does a law office, or being a professional politician; but it is not a question of what results may accrue at its prettiest, but what results are likely to accrue as men and things are, not as they should be. To say this is the fault of the men and things, is to beg the question; and even when begged, it resolves itself into such care and attention being given to bees that the man who does it becomes a specialist almost by necessity.

Why, even Mr. Root with his success, says bee-keeping is "hazardous." It is so. It is not a bonanza, but a living—a living to a man who makes it his business, and saves the surplus in honey and dollars of a good year to make up for the poor year.

I would write much more; in fact the more I write the more points and arguments I see on my side; but I recollect that you may think my screed is too lengthy already. I, however, do say that this is a very vital question to men who are putting money (or think of doing so) into the bee-business, and it needs threshing out thoroughly.

Austin, Texas.

Read at the Northern Ohio Convention.

Feeding Bees in Spring.

H. R. BOARDMAN.

Bees, like many other insects of the same family, consume very little food in their perfect state at any season of the year, and much less during the winter while in a dormant state, than during the activity of the honey season. We have been astonished at the statements of entomologists that this class of insects consume as much food during the few days of their larval development as in all the rest of their lifetime. This accounts for the rapidity with which their stores sometimes disappear when rearing broods extensively, and also throws some light upon that mysterious phase of life—the dormant slumber of winter, when animation is nearly suspended. We find them able to live for nearly half of the year, which would comprise nearly their whole life time, in winter quarters within the hive, without serious results. This is truly astonishing, but much less so in the light of the above facts; and these facts furnish us a very important factor in the consideration of our subject; for in order to supply the food in the most economical way, a knowledge of its disposition and uses within the hive is indispensable.

Brood-rearing that has been suspended during the winter, is resumed at the approach of warm weather, sometime in February or March on the summer stand, and in the bee-house or cellar, somewhat earlier. The food resources of the colony at this time was stored by the wise instincts of the bees of the previous season, not for their own use, for they do not live to use it, but for their posterity, and would prove sufficient for their necessities usually, were it not appropriated to increase the stores of avaricious man. Up to the time brood-rearing commences in the spring, the stores in the hive remain almost untouched; but as brood-rearing begins, the bees are gradually aroused from their winter sleep to increased activity, and the stores will be drawn upon as the season advances, in proportion to the amount of brood used. The first few warm days of spring, when the bees fly freely, make astonishing inroads upon their stores. This makes it very important that a critical examination be made to ascertain the condition of the stores, and all light colonies should be marked to be fed; and these light colonies should be made the objects of special care until honey is furnished by the flowers. I cannot attach too much importance to the vigilance necessary to succeed with these light colonies; for if we neglect them only a day or two when their stores are exhausted, not only does the work stop and much time is lost, but the brood is eaten and thrown out, and the work that has taken weeks to build up is destroyed. Even in the midst of the fruit bloom, when the weather was unfavorable, I have seen bees suffer for food, and in their extremity eat and destroy their young larvæ to prevent starvation, and even perish outright, with the whole world a profusion of honey-bearing flowers.

There have been invented many kinds of feeders devised to supply food to bees; but undoubtedly the best feeder ever invented has not been patented, that made by the bees—the comb—and the best food, pure honey, stored and sealed by the bees. Probably no more economical way of supplying food to bees in need of stores can be found, than giving a comb of sealed stores. This can be placed in the hive just where it is needed, by exchanging it for an empty comb from the hive, and should be placed next to the cluster of bees; especially important is this if the colony is weak and the weather is cold. This they will use just so fast as they need it, and not so rapidly as to excite them to unnecessary activity. If no combs of sealed stores are to be had, the next best thing is empty combs for feeders, filled with sugar syrup, and fed in the same manner. Some prefer sugar syrup to natural stores of pure honey. I think this would be conceding too much. A division-board is sometimes used in the hive, dividing the stores thus supplied, from the colony, leaving an opening through which the bees can pass. But the best result, I think, can be obtained by crowding the stores close to the cluster of bees, and in considerable quantities at one time, when the capacity of the hive will admit of it. This plan being less trouble, and much less likely to induce robbing than feeding frequently in small quantities. Later in the season when the colonies have become too large to be fed in this way, an upper story can be put on with a cloth or board between to economize the heat, and the combs of feed put in the upper hive, leaving, of course, a small passage-way between the upper and lower hive. A colony supplied with an abundance of stores in this manner, will scarcely ever fail of surprising the bee-keeper with a large yield of honey at the end of the season.

Entrance feeders come next. These are so made that when placed at the entrance of the hive, they are only accessible from within, excluding outside bees. There are many other kinds of feeders too numerous to describe here, but I consider the entrance feeder the best of its kind. Having commenced feeding, whatever may be the plan, there is but one economical course to pursue: continue the supplies until natural stores are abundant. To the novice this may all seem very simple and easy; but it requires the utmost caution to feed during a scarcity of honey, especially with weak colonies in the yard, without inducing robbing; and when the disposition is once aroused, the effect on the apiary is very demoralizing, and it will prove a source of annoyance and perplexity to the bee-keeper. "An ounce of preventive is better than a pound of cure," is particularly applicable here. Feed at evening after the bees are done flying; be particular that no feed is dropped about the yard, and see that no crack or peep-hole in any hive will admit a marauder. Keep watch with "Argus eyes," and nip in the bud the first attempt at pillaging, and when conducted with care, feeding is easy.

I have thus far spoken only of feeding to supply destitute colonies. Much has been said about stimulative feeding. This consists in feeding bees in order to form a sustitute for the regular flow of honey from the field in the honey season, in order to arouse the bees to greater activity and increase the rearing of brood. I very much question the economy of this kind of feeding. If a colony of bees be fed a small quantity of warm syrup or honey, they immediately take wing in great numbers, and present the busy scene of a mid-summer day, although it may be so cold that no bees were flying before. Not only is the colony fed aroused to unusual activity, but the other colonies in the yard will sympathize in the excitement, and a disturbance will be caused more or less over the whole yard, which will increase at each successive feeding. If this kind of feeding is continued regularly each day, the effect upon the colony fed is similar to that produced by the natural yield of honey from the field. The brood-nest is extended, drones reared, and a general appearance of prosperity prevails. This condition, no doubt, would seem gratifying to the bee-keeper were it not that it must be continued by abundant feeding until natural supplies are furnished from the fields, and the weather will permit the bees to gather it in.

We may look forward hopefully to the apple bloom in expectation of relief, and be disappointed by dismal rains and continued cold; if so, we are confronted by the startling fact that our rapidly growing colonies are now looking to us for food until raspberry or white clover comes; and unless we supply it, the bees will surely economize at the expense of the valuable brood already in the hive—certainly a very poor economy for the bee-keeper.

We are almost startled on learning how short is the average life of bees during the activity of the honey-gathering season—very much shorter than in a season of rest. Thus showing us at what expense of vitality the full activity of life is enjoyed. This result is simulated in stimulative feeding. The simulation of the honey season that we are able to practice, is faulty in one important particular. We are unable to give the warm bright sunshine of June; but instead the sharp, chilling winds from the north prevail, and the workers which start out with bright prospects, pay dearly for their short-lived ambition. Most of us observed that those colonies having abundance of natural stores in the spring were built up quietly into strong colonies, crowded to overflowing with bees, and the first to cast new swarms. This is the natural way, and who can say it is not yet the best.

Flour feed in early spring, as a substitute for pollen, was a few years ago almost universally advocated by the bee-keeping fraternity, and some favor it yet, although many who once practiced it have abandoned it, after giving it a test for years, satisfied that the good resulting from it would not compensate the evil. After considerable experience in this kind of feeding, I am satisfied that there are times when a judicious feeding of some kind of flour, as a substitute for pollen, would be beneficial. But I am not satisfied that an indiscriminate feeding of flour, whenever the bees will take it, always results beneficially.

East Townsend, O.

For the American Bee Journal.

The Iowa Central Convention.

The Iowa Central Bee-Keepers' Association met at Winterset, Iowa, on April 18, 1884. The meeting was called to order by the President, A. J. Adkinson, who asked for a report of the successes and failures in wintering, which resulted as follows:

Out of 425 colonies put into cellars and clamps, 133 were lost; and from 148 colonies left on the summer stands, there was lost 101. Some had tried tacking wire screens over the fronts of the hives, which resulted in the death of the bees so treated.

Adjourned to meet at 1 p. m.

After calling the meeting to order, the President read a letter written by Mr. Thos. Chantry, who has again been very successful in "clamp" wintering.

The following questions were asked:

1. Which is the better plan of increase, swarming or dividing? The majority of those present seemed to favor the dividing plan.

2. How can the bees be made to build their combs straight? Mr. Bailey and others advised raising the backs of the hives 6 or 8 inches.

Adjourned to meet at Winterset, Iowa, June 20, 1884.

J. E. Pryor, *Sec.*

For the American Bee Journal.

Reversible Frames.

M. M. BALDRIDGE.

My attention has once more been called to an article on "reversible frames," on page 167. The writer, this time, is one of those enthusiastic Michigan bee-keepers, and what he says reads about as follows:

"Reversible frames are not exactly what they have been *cracked up to be.* If I understand the matter, there are two desirable features claimed for reversible frames. First, by reversal the bees will fasten the combs to the bottom-bars, and if any honey is stored along the under side of the top-bars, the bees will remove this honey to the section boxes."

"Now, by using wired frames, the first desirable feature is rendered null and void; while, in regard to the second point, would it not be much more desirable to employ such a method of management that the honey will be stored in the sections in the first place? If reversible frames were a very desirable thing, I think a reversible hive would be still more desirable. Had hives been made small enough so that ordinary queens could keep them full of brood, perhaps reversible frames would never have been thought of."

I see nothing in the foregoing to prove that "reversible frames" are not exactly what they have been "cracked up to be;" but, perhaps, I am blind. I do not see but that the writer admits, substantially, that by reversing the frames the bees will fasten the combs to the bottom-bars and make them as solid and perfect as they always do to the top-bars. If this be true, then in that respect, are not "reversible frames" exactly what they have been "cracked up to be?" The writer certainly does not deny the claim. He says, however, that the same result may be secured by using wired frames, and without reversing them. Now is that true? It may be true when the combs are built in the second story, but how is it when confined exclusively to the brood chamber?

It should be borne in mind that very few of our comb-honey specialists now use the two-story hive deep enough for two sets of frames. However, perhaps the wonderful "strain" of hybrid bees, so highly "cracked up" in Michigan, will do as he claims; but I have seldom seen it done in the brood-chamber in Illinois or elsewhere, by the *ordinary* "strains" of bees.

Our Michigan critic also admits, substantially, that when the combs in the lower story are supplied with both brood and honey, by reversing them the bees will remove the honey now at the bottom of the hive, owing to its *unnatural* position, to the sections above. If this be true, then in this respect, are not reversible frames "exactly" what they have been "cracked up to be?"

I infer from what our Michigan critic says, that he is, perhaps, acquainted with a system of management which forces the bees to deposit their honey in the sections "in the first place," and that the system does away with the necessity of reversing the frames, and possibly of scarifying the honey when sealed. This may all be true, but may not "reversible frames," at times, aid materially in securing such a result? And if they do not assist, will they do any harm?

If reversible frames are really desirable, then would not a reversible hive be more desirable? Possibly, but please tell us *why.* I can see no good reason for making the *hive* reversible.

For several years I have been convinced that the 10-frame standard Langstroth hive is too large for securing the best results in comb honey; and mainly because ordinary queens are unable to keep all the combs *full of brood.* For that reason some bee-keepers have made the hive smaller by using only eight standard frames; but by so doing they have diminished the capacity of the surplus-honey chamber. To avoid this, I prefer to reduce the depth of the 10-frame hive to frames only 7 inches deep in the clear. I did this in 1876, and have used such hives more or less ever since.

On some accounts I prefer such hives to the 8-frame Langstroth, and yet I think it will pay *me* to use "reversible frames." So you see even the small hive, small enough so that ordinary queens could keep them "full of brood," did not stop me from thinking about reversible frames; nor am I yet convinced that such frames are not *exactly* what they have been "cracked up to be."

St. Charles, Ill.

For the American Bee Journal.

Treatment of Foul Brood.

A. W. OSBURN.

After reading the able article by Dr. A. B. Mason, on page 231, I will relate a portion of my experience with "that dread disease" while in California, where it prevails to a much larger extent than in any country I was ever in. I agree with the Doctor that too little attention is paid to a subject which is of such great importance to every person who keeps bees, whether he has one colony or one thousand.

In treating a case of foul brood, of late years, I have tried but the one method—the starvation plan; and I have yet to see the case I could not cure by my method of operation.

When I discover I have a case, the same evening when it is too late for the bees to fly, I smoke the colony thoroughly and close the entrance for a few moments, so when I raise the cover no bees will rise and fly. I should have said, before opening the hive, I set it on a sheet in a clear, open space, so that when the cover is removed what bees rush to the top for fresh air, will not crawl off on the ground, and thus escape the fast to which I propose to subject them.

I have prepared an old hive with 4 or 5 old frames. I then proceed to shake and brush every bee into the box, invert the hive that formerly held the bees,on the sheet, and thump all out and unite them with those in the old hive; and placing on the old hive a tight fitting cover in which are four 1½ inch holes, with wire cloth nailed on the under side. I nail this cover down that by no accident it may come off. I then put them in a cool place. In two of the holes in the cover I place sponges wet with a solution of salicylic acid, borax and salt. I make the solution as follows: Take a clear pint bottle, put in two heaping teaspoonfuls of salicylic acid, two of powdered borax, and two of the best salt you can get. Shake them well and let it stand till the acid is dissolved. With this solution saturate the sponges for the bees to drink from while they are confined; for bees, when shut up, will perish for the want of water much sooner than they will for the want of food. I keep them shut up just 48 hours; then give them a clean hive, a comb of honey, and a sheet of eggs and larvæ, and they are fairly started to housekeeping again, cleansed, purified, and in every way all right; at least such has been my experience in all cases similarly treated, and those are not a few I assure you.

Now, as I said before, there never has been an exception to this; every colony treated as above directed have come out cured. I have tried all the other plans mentioned by the Doctor, but I never had the success with them that I have had with the Simon-pure starvation plan.

Now let us return to the hive and combs that have the disease. The combs and frames I burn, and while they are burning, I place the hive inverted upon the fire, which in a moment becomes a burning mass with the rest. I let it remain until it is well charred on the inside, and then boil it in ashes and water. I put it over the fire to melt the wax out of the cracks, that the water may have a fair chance to penetrate every crevice. I then consider it free from all traces of the disease; at least I have never had any bad results come from a hive treated in that way.

I wish to say to all those who have had no experience with foul brood, that if they find they have a case, not to get excited, but go about it as you would any other job which you are determined to do and to succeed in. Do not think because one colony has it that all you have in your apiary must and will have it. Experience has proven to me that such is not the case; for I have had as healthy colonies standing within 2 feet of as diseased a one as ever gathered a pound of honey.

While I would caution self-possession and determination in such cases, I would also advise that no time be lost before doctoring the sick colony; for how fast it will spread, depends upon a multitude of circumstances which would take up too much time to explain here; suffice it for all practical purposes that if as soon as a colony is found to be affected, it be resolutely dealt with, there is no danger but that you can keep the upper hand of it.

One year ago I was in the "hot bed" of foul brood (California); and with an apiary of 270 colonies I did not have over two cases, on an average, a year. But in that locality, where it was so common, I used a preventative. I prepared the drinking water for the bees as regularly as the morning came. To each quart of water I put two table spoonfuls of the solution used for wetting the sponges for diseased colonies when shut up; and any one who has never tried watering their bees, would be surprised to see how willingly they accept any act of kindness in that direction.

I take this ground for believing that the solution given to them in their drinking water, and the food prepared by the bees for the larvæ, is composed of water, honey and pollen; and if the water is impregnated with salicylic acid,and comes in contact with a spoor of foul brood that it will kill it. I can only assert this, but one thing I know; *i. e.*, I have had healthy and strong bees in the midst of this scourge, while others have gone by the hundred colonies where they were not troubled by foul brood.

I am not one who believes that foul brood comes from any local cause, such as chilled brood, poor queen, or any thing of the sort. Where it has its origin, I do not know; but I am more fully prepared to accept Prof. Cook's solution of the problem than any other I have seen.

I would say to Dr. Mason and all other "old veterans," that I have not written this, thinking that they will learn anything new from it. It is simply my way of treating the disease in later years; and in which I have been very successful. If the novice can reach success through the same channel, I will be more than paid for my trouble.

San Miguel, Cuba, W. I.

For the American Bee Journal.

Right and Wrong Names.

JOHN PHIN.

Does Mr. Maltby really mean to tell us that an insect can be "perfect" in two States? Perhaps he does not mean the moth-larvæ, but the Editor of the BEE JOURNAL and Rev. Wm. F. Clarke. If so, allow me to congratulate them both; but, perhaps, I am again wrong. He may mean two States of the Union (printers sometimes makes mistakes and use lower case for capitals). I know that the moth is perfect in New Jersey. How is it in Illinois?

Again, are there really "drone" ants as Mr. Maltby asserts? If so, it is news to me. I have heard of male ants, but never of "drone" ants.

Is Mr. Maltby's vocabulary so limited that "drone eggs" and "worker eggs" are "the only ways in which the two sexes in the egg can be expressed" by him? How would "male eggs" and "female eggs" answer? or any other of half a dozen good ways that might be suggested? How would he understand "queen eggs?" Would this mean eggs laid in queen-cells or eggs laid by a queen? Did he ever hear of a white blackbird? Are all blackbirds necessarily black? Are all black birds blackbirds?

It is unfortunately true that a great many expressions "do not convey an idea of anything" to some minds. The ideas that we derive from words often depend as much upon our own previous knowledge, as upon the actual arrangement of the syllables, words and sentences.

Thus Mr. Maltby sees in the expression "ivory worker," only a person who works in ivory. A dairyman might see in it a worker made of ivory (and used for working butter). Another man of still broader views might see other meanings in the same sentence, and would, by the aid of the context, pick out the true one.

A former critic of the expression "egg workers," showed his ignorance of the elasticity of our language, by asserting that an "egg-worker" was a worker made of eggs, just as a tin rooster was a rooster made of tin; but a tinsmith is not a smith made of tin, and an egg-worker is not necessarily a worker in eggs.

Patterson, N. J.

For the American Bee Journal.

Pollen not the Cause of Diarrhœa.

ROBERT CORBETT.

On page 233, Mr. Thomas H. Shepherd speaks of late swarms having the diarrhœa, and why they have it. I beg leave to differ from him, and to show that it has not been my experience in 50 years of bee-keeping.

I have always found that my late or young swarms are the cleanest, and in the best condition in the spring. No one must expect that a quart of bees will winter so well in the same temperature as four times that amount will, if each have the same space in the hive. While the full colony will come through all right with the temone-quart colony would require a temperature at 40° to 50° above zero, the perature of 55° to 60°. Everything else being all right such a small colony will come out in the spring cleaner than the full colony.

I agree with Mr. S. in regard to pollen, for I do not believe that it is the cause of diarrhœa, but that it is fall honey. Neither do I believe that fall honey is as good as summer honey on which to winter bees, if it has not been gathered from cane or cider mills. As a general thing fall honey is thicker and heavier than white clover honey. Mr. S. says that healthy colonies have their combs filled with summer honey, while the sick ones have theirs filled with boneset, aster and other kinds of fall honey. He seems to think that the weak must succumb to the strong, and take what they can get; and that I think is the principal cause of the disease.

He quotes this from Dr. Tinker: "When in the winter the temperature of the cluster and interior of the hive, falls below the point of health, the beginning of their ills is here." Truer words were never spoken. Then Mr. S. says, "Where he gets his proof I do not know." I can tell him that the doctor gets it right in the hive where the sick bees are. He also says, "I find, where diarrhœa does so much damage, there is an abundance of fall honey and a famine before it commences." How is this? Here we have no clover and but very little basswood, so the winter stores of the bees are, in a measure, all fall honey; and our bees are as free from diarrhœa here as anywhere else.

To obtain a good colony, take an August swarm which has had enough stores to winter on, and it will be cleaner and brighter in the spring, than an older colony in the same temperature. But in wintering light colonies the space which they occupy must be contracted, or there must be two holes four or five inches from the top of the hive, especially if the hive is a deep one, but no ventilation above.

While a full colony will bear some upward ventilation, the light one will perish; and while the strong one is able to cast off its foulness below at the entrance, the light one is not. Therefore the two holes are required in the front of the hive above the entrance covered with wire cloth, then the light colony will be able to cleanse itself of its foulness. Whilst they can cast this foulness to the bottom of the hive they can cast it so far as to be carried away by the current of air which is passing from the entrance through the holes. Thus the light colony is preserved from any dampness; and if the atmosphere is all right the ventilation is also.

Manhattan, Kan.

For the American Bee Journal.

Tuscarawas Co. O., Convention.

The bee-keepers of Tuscarawas Co., O., met at Port Washington, O., on May 15, 1884, and duly organized by adopting a constitution and by-laws, and electing the following officers, viz.: A. A. Fradenburg, President; Geo. F. Williams, Secretary; and T. A. Swihart, Vice-President.

As the meeting was held at the time of year when farmers are planting corn, the attendance was not large. Several subjects relating to bee-keeping were discussed, and all present seemed to be much interested.

Adjourned to meet in New Philadelphia, O., on Oct. 23, 1884.

A. A. FRADENBURG, *Pres.*

For the American Bee Journal.

Shall we Rear Hybrids or Not?

J. E. POND, JR.

I am a stickler for purity of blood, and have, as yet, to learn that a superior race can be improved in its first generation by crossing with an inferior. I am well aware that our domestic breeds all sprang from one original, and that great improvements have been made by mixing blood; but to produce a distinct strain, like the Jersey cattle for instance, has taken a long period of time, and has been done only by using the greatest care in the blending of strains.

Now, if we apply this same principle to the honey-bee, we must know that a long period of time will inevitably elapse before a distinct strain can possibly be produced; and whatever we may rear that is less than a distinct strain, will be of no value whatever. I mean by a distinct strain in bees, such queens as will invariably produce such certain characteristics in their worker progeny, that we may know them with absolute certainty. Anything short of this is nothing but hybridizing, as it is called.

I have no fault to find with any one who prefers, for his own use, Italians mixed with blacks; that is his business. If he prefers hybrids, he certainly has the right to rear them; but I do find fault with any one who claims to have made by crossing the Italians with the blacks, a distinct strain, which is far superior to anything now known, simply because I believe it is impossible so to do, and because it is putting hybrids into a prominent position under the garb of a new strain.

What is the claim made in regard to these "bees for business," as they are called? Simply that they will occupy sections more readily than the pure Italians. But will they? I have many times read the statement that they will do so, but my own experience teaches me the contrary; and I must conclude, judging by my own apiary, that he who connot induce his pure Italians to readily work in sections, does not understand the "nater of the critter;" and that it is his fault rather than that of his bees.

I am well aware that the Italians are inclined to swarm out when the brood-chamber is filled, but not more so than other bees when they are properly managed. It is difficult to prevent swarming when working for surplus comb honey, still it can be done with the exercise of care, time and patience.

I have never known a colony of pure Italians to cast a first swarm before the brood frames were full; while the blacks and hybrids will often do so. This, I judge, to be a peculiarity of the Italians; and by taking advantage of it, I find they enter sections, and fill them too, as readily as any other race of bees.

I will give my method of management, and have, no doubt, that others upon trial of it, will meet with the same success that I do. I will say in the first place, that all attempts to prevent swarming must be made before the swarming impulse seizes the bees, else it will be almost impossible to prevent it, no matter to what race or strain the bees may belong; for that reason I begin early to prepare my bees for comb honey producing, and I am so successful, as a rule, that the sections are entered at once, after they are placed over the frames.

Every one knows that the instinct of the honey-bee teaches it to place its stores above the brood; so I take advantage of this principle, and cause the frames to be filled with brood completely to the top. It is not a difficult matter to do this, and requires but little time; but in any business, no matter what it is, we expect to expend time and run into difficulties, and, of course, must expect to do so in apiculture.

As soon as the frames are well filled with brood to the very top—if there is a flow of honey—I put on sections, with the result that the bees at once occupy them, and usually fill them before swarming. I use worker foundation in the sections, and if I allow a small amount of drone comb in the brood-chamber, and shave off the caps and drones' heads when capped, I find no trouble from the queen occupying the sections.

I admit that it requires some little care to be successful in the method I have outlined, but I would rather take ten times the care, and be at ten times the trouble, rather than to be bothered with a lot of hybrid "bees for business" in my apiary. But we admit for a moment that the hybrids will work more readily in sections, do we then wish to go back to the dark ages of 30 years ago, since which time we have been laboring hard to get rid of these very hybrids, and overrun our apiaries and the country with them, and paying for them the price of pure Italians? If so, all right; but when I want hybrids, I shall not be seduced into buying "bees for business" at a high price, but shall get a colony of blacks and hybridize my own queens at a cheap rate.

Experts will not be injured by this sale of new strains. for they know just what they are; but beginners are the ones who are injured, for they suppose the strain which they buy will duplicate itself through several generations, till they learn the contrary by sad experience, and at the expense of ruining their apiaries.

Foxboro, Mass.

For the American Bee Journal.

Half-Pound Sections.

W. Z. HUTCHINSON.

Mr. W. D. Wright is mistaken if he thinks that I am more solicitous for the welfare of the half-pound sections than I am for the welfare of *any* other apiarian fixture. I wish *everything* to stand upon its own *merits;* and it was the fact that many bee-keepers were not willing that the half-pound sections *should* stand upon their own merits that inspired me to write as I did.

Half-pound sections *probably* will not come into general use, and they may be dropped altogether, but whether they are or not, again I say, why abuse them? Why look upon them as an enemy? Why *hate* them? Why rejoice in their downfall? I can see only one reason for this feeling; and that is, that if some bee-keepers succeed with them, their denouncers fear that *they* will be obliged to use them. or fall behind in the race.

Mr. Wright says that they are not noticed in the market reports. Perhaps the dealers can explain that. I have seen them upon the market and have seen them *sold* at a price that made it profitable to use them; but the dealer handling them did not quote them in his market report.

I doubt not that bee-keepers, quoted by Mr. W., as having used half-pound sections for three years, were practical men; but if they failed to secure as much honey as when larger sections were used, they yet have something to learn in regard to the "principles underlying the production of comb honey." Hear what Mr. Heddon says in a letter to me, concerning the half-pound sections:

"I have just read Mr. Wright's reply to your article, and wish to say, so far as my report and experience goes, I received no fewer pounds of surplus honey with the use of one-half pound sections than with the pound sections. They injured my business only because they complicated it by the addition of a size not not so much called for.

"They were detrimental in the apiary only for the same reason; that they complicated the work and fixtures. I think them too small for general trade. but for lunch-rooms, restaurants, and such places, they are in demand in small quantities at a price that pays us well for the extra cost of production; which I estimate at an advance of 20 to 25 per cent."

Mr. Wright thinks that my comparison of small packages of extracted honey, with half-pound sections, "not a parallel case at all." Is it not, so far as the consumers are concerned? And as I said before, so I say again: "If the public are unwilling to pay the cost why this feeling and prejudice against half-pound sections."

Rogersville, Mich.

For the American Bee Journal.

Objections to Dovetailed Sections.

JEROME TWICHELL.

Having had inquiries as to my reason for discouraging the use of dovetailed sections as reported in my address before the Western Bee-Keepers' Association, I will briefly explain it as follows:

The best section-box for all uses is the strongest, stiffest and lightest. Strength is required that they may hold together well; stiffness. that they may not give at the corners. and get out of shape; and lightness, that there may be no more wood than necessary sold for honey. My experience in having comb honey overhauled on its arrival, is that the best conditioned crates are always those containing the strongest and stiffest section-boxes, which have protected the combs against the jarring of the crates in handling.

I do not wish to be understood as deprecating the use of dovetailed sections, more than any other kind that has not good, stiff crates. As an additional means of stiffness and security to the combs, I would strongly urge the use of glass, firmly fastened on each side of the section; and fitting as closely as possible the inside of it.

It is better that the inside corners of the pieces forming the section be rabbetted so as to make a shoulder for the glass to fit in. This forms at once, a stiff, solid and tight box in which the honey will stand any ordinary handling, and carry safely by freight almost any distance. This is almost absolutely necessary for the shipping trade, and I have almost made up my mind to decline shipments of honey put up in any other way.

If some of my shippers could see the amount of work and worry. and mixed up messes that they have occasioned me, not to mention the loss to themselves. they would certainly institute a general reform in the manner of preparing and packing their honey.

Out of nearly 1,000 packages of honey prepared in the manner suggested above, and packed in crates of not over 25 lbs. each. with good hand-holes cut in the ends, there has not been 100 lbs. loss to the shippers. While on the contrary out of the same quantity received in other shapes I venture to say that after having done all I possibly could to save it, there was still an average loss of not less than 10 per cent.

For the immediate home trade it does not make so much difference; but for shipping. it must be made secure against the rough handling in transit.

And while on this subject there is one other suggestion, I would make; *i. e.* with regard to color. No comb honey which is dark, no matter what the quality, flavor, or condition, will sell as well as the white; it will always hang as a drug in the market, and finally be forced off at a sacrafice or thrown in to make a bargain.

This honey though, if extracted, would sell very readily at 7 to 8 cents per lb., and the wax at 20 to 30 cents per lb., and really net more, and in a shorter time, than if shipped in the comb. But choice. white comb in good condition will always find a ready market at this place, and bring a fair price. Two-pound sections will be the favorite by about ¼ majority. One-pound sections will follow closely at about 1 cent advance over the price of the 2-pounds, and a few ½-pound sections may be sold at still 1 or 2 cents advance. The ½-pounds need not be glassed to carry safely. Larger sections than 2-pounds should never be sent to market.

Kansas City, Mo., May 27, 1884.

For the American Bee Journal.

Correct Nomenclature.

JOHN HEWITT.

Mr. R. J. Kendall, on page 108, has misquoted my article in the *British Bee Journal* for Jan. 15. By reference to it (page 31) you will see the "jarring" is to be done when the bees are not on the combs. I distinctly say jarring the hives or combs (with the bees in) will make them savage; and he cannot find the place where I say, "you have to *tread* on one to make it sting." If things are to be called by their right names, do let the principle extend to quotations.

On reading his article on page 40, I think I can safely form several conclusions; one of which is: he had better, by all means, get some *pure* and *true* Syrians, not Holy Land bees, then he would have no swearing, and handling bees would be a pleasure.

While on this subject, allow me to try to correct the Editor's foot-note to Mr. Frank Benton's article (page 39). I believe he will forgive my doing so considering his anxiety to have everything properly named: He says: "A glance at the map of Asia will show that Palestine is a portion of Syria, bounded on the north by Lebanon, and on the south by the Arabian Desert. Syria comprises this whole land, but extends north to Asia Minor."

It may do so now under the Turkish rule, just the same as England when spoken of, is understood to imply Scotland, Wales, and very often Ireland also; but an Englishman is never a Scotchman, nor, for that matter, a

Briton either. The proper use of this word being for the natives prior to the Saxon conquest, and at present includes the Cornish, Welsh and Scotch, but not the Saxon; though the word "Britisher" covers all who fall under our flag; and in addition to our islands, includes Cyprus, Canada, Hong Kong, India, Jamaica, etc., in fact people of all colors.

Neither do we in England call the inhabitants of the New World, indiscriminately, "Americans," though in this particular we are wrong; but reserve the appellation for those protected by the "stars and stripes" only; and if we wish to refer to others, they are spoken of as Canadians, Mexicans, Brazilians, etc.

Now Palestine, or Holy Land, never has been understood to extend north of the Lebanon mountains and if north of this barrier—in the land of the *ancient* kingdom of Syria—a distinct race of bees are found, why call them "Holy Lands?" or south of it, "Syrians?" The sooner everything is called by its proper name, the better for all progress; but do not let us have the same mess with these new races of bees that has been made with Italians.

Just to illustrate what I mean by this: These bees were at first thought to be a distinct species and were named *Apis Ligustica*, from the province of Liguria, in which they were common; and it was thought that all yellow-banded bees were of this species. As such bees were found north and south of the Alps, they were thought to be identical, and were known and sent out by the name, Ligurian bees. Then I suppose, because Liguria is in Italy, they were further dubbed "Italian" bees, whether they came from Switzerland or Italy; the Swiss is preferred by most apiarists.

If we go north or south, we find black bees; thus in Southern Italy the *native* bees are *black;* they are black also in Sicily and Malta. How is such a jumble to be unraveled? Are the Swiss or Italian Alps' bees to be called pure Italians, or the Southern, blacks?

But while we may not get out of this mess, we may avoid repeating it with the new races; so let us, by all events call them by the names Mr. Benton gives them. If there is any distinction *he* will be sure to notice it, and bee-keepers may rest satisfied on his judgment; for on your lines of reasoning, the Cyprian may just as well be called a "British," the same as the natives of Scotland; or Italians, "European," like you would call Canadians and Mexicans, "Americans." I think you will, on reflection, see that a better nomenclature is desirable.

In conclusion let me prophesy that in five years time, everybody will be keeping *true* Syrians, and smokers will be handed round as curiosities of bygone days of barbarism.

Sheffield, England.

[Our foot-note to Mr. Benton's article, on page 39, is, we believe, correct, notwithstanding this criticism. We did not say that a Scotchman was a "Briton," but we did say that he was "British." Is not Scotland one of the British Islands?

It is certainly wrong to say that the word "American" is applicable only to the people of the United States.

We intended to speak of Syria as it now exists, not what it was in ages past. Mr. Hewitt's objections are not valid. Let us "call things by their right names."—Ed.]

SELECTIONS FROM OUR LETTER BOX

Bees in Texas.

Bees are doing very well at present. There are lots of bees kept in this part of the State, but only a few persons know how to manage them so as to obtain the best results. I have had some experience in bee-keeping in Missouri, and think some of trying it here.
Clark S. Fuge.

Moody, Texas, May 16, 1884.

Oil Cloth Cover for Frames.

In reply to D. R. Rosebrough's remarks on this subject, on page 310, let me quote from the twelfth thousand of my Manual, page 135: "Cover for Frames.—In summer I prefer oil-cloth to cover the frames. This is used with the glazed or enameled side down, and should be just the size of the hive. This is durable, is not covered so quickly with propolis, and is easily cleaned. Some keep this on in winter, but I prefer a porous cover. From the cold days of fall to the warm days of spring, I replace the enameled-cloth covers with those made of the best factory cloth." As I do use and recommend such covers, of course I need not explain why I do not.
A. J. Cook.

Lansing, Mich.

Bees Gathering the Nectar.

I put 16 colonies into the cellar last fall. This spring I took out 3 strong colonies and 5 with queens, and enough bees to cover one-half of one side of a Langstroth frame. My bees gathered more honey during the last week than they did during any month last summer. We are having a cold spell of weather now.
Hugh Williams.

Racine, Wis., May 27, 1884.

A Good Report.

My bees have wintered very well. On Nov. 15 I put 82 colonies into the cellar, and put them out on March 20. All were alive, but 3 of them were queenless. I had 2 queens on hand yet, so I managed to save 2 of the 3 queenless ones; the other one I put with another colony. Only one colony showed signs of diarrhœa. I had my first swarm for the season on yesterday; and it is the earliest one I have had since keeping bees. It issued from a colony which has not been fed any this spring. I think that I will have 5 or 6 more if the warm spell of weather continues much longer. Bees are working nicely on fruit bloom now, and they are storing honey rapidly. The outlook for an abundant honey harvest is good. White clover looks promising. At some future time I will give my plan of preparing bees for wintering, on which, I think, they will winter safely every time.
H. J. Smith.

Burlington, Wis., May 19, 1884.

Light on the Subject.

I have read the book, "Bees and Honey," with interest. It has given me much light upon the subject of bee-culture and the habits of bees.
J. K. P. South.

Jett, Ky., May 26, 1884.

Bees Building up Fast.

Bees in this section are storing surplus honey slowly, owing to so much damp and cloudy weather. The present spring resembles very much that of 1878; and that year was noted for its large yield of honey. As it was then, there will be but very little honey extracted this year before June 1. In the mean time bees are building up strong, so that when the warm and sunshiny weather comes, there will be a tremendons large army of workers to go into the field to gather the harvest; and there is scarcely a doubt but what they will bring in the nectar by the tons.
J. E. Pleasants.

Santa Ana, Cal., May 19, 1884.

Almost Discouraged.

I put 15 colonies of bees that were Italianized last summer, into the cellar last November, and all died of diarrhœa, I think, as they kept coming out during the whole winter, and daubed the hives and every thing badly. The cellar was ventilated by a chimney and a kitchen adjoining. During the winter before last, I lost 20 colonies in Eclectic hives on the summer stands. I shall stock up once more, but I am almost discouraged. I have a new hive for wintering bees on the summer stands.
Oliver K. Pierce.

Ayer, Mass., May 26, 1884.

A Very Small Loss.

One year ago I started with 28 colonies, and increased them by natural swarming to 49. Last season I produced 1,000 pounds of comb honey in the 1-pound sections, and 500 pounds of extracted honey. In the fall I bought 10 colonies more. My loss so far has been one queen and one colony, the latter having starved. I use the Mitchell frame.
J. M. Hoak.

Shelby, O., May 27, 1884.

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☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed).
N. P. Allen, *Sec.*

◆

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Local Convention Directory.

1884. *Time and place of Meeting.*

June 6.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.

June 19.—Northern Mich. at Ionia.
F. A. Palmer, Sec.

June 20.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Trembling Bees.

I have, in my apiary, 2 colonies of Italian bees, and there is something wrong with them which I do not understand. There appears to be two kinds of bees in the hives; one kind, a fine looking Italian bee, and the other a smaller bee with a black head, and when alive the lower part of the body is of a dark purple hue. The alighting-boards are completely covered with bees, and all seem to be shaking, or of a trembling motion. The Italians have been killing them off in great numbers on the alighting-boards for the last two weeks. The colonies are very populous, having 8 Langstroth frames of brood in each of the hives. I send you a few of the bees, and would like you to inform me through the Bee Journal what is the matter with them.

Wm. K. Lawson.

Cold Spring, N. Y., May 21, 1884.

Answer.—I can only guess at the correct solution of the case. I do not think the "trembling" and fighting among your bees is from the same cause. I suspicion that the little black-headed bees are from another colony, and that is the reason they are being killed. The tremulous movement, I think, is a natural one, which bees often make. I believe your colonies will come out all right.

Carrying out Young Bees.

Last season I put a swarm of hybrid bees into a two-story Langstroth hive, and being anxious to have them strong early this season, I fed them during the latter part of March and the forepart of April, when they became very full of young bees; and as soon as they began to hatch, the bees commenced to carry them out, and have kept it up ever since. I took them out of the hive about 10 days ago, and could not see any thing wrong. They were clean, and had plenty of room. What is the cause and the remedy, if any, for the above trouble? Ulysses Adams.

Missouri City, Mo.

Answer.—I have never known bees to carry out larvæ or pupæ except when moth-worms or something else had mutilated the cells and killed them; or when, during an excessive honey flow, they had to make room for more honey in the brood combs, or else lose it.

Transferring and Removing Bees.

Will Mr. Heddon please answer the following:

1. By your method, or the old way of transferring, can bees be moved a few rods (or ½ mile) without many of them going back to the old hive? That is by removing them in the evening of the day they were transferred.

2. Immediately after a natural swarm has been hived, or at the time of transferring a colony of bees, can their queen be taken from them, and a new one given them without danger of their killing the new one? Would either of the above times be suitable?

3. Upon removing a colony of bees from a bee-tree to a movable-frame hive, what hour of the day is the best in which to cut the tree down in order to save the most bees and brood combs? C. E. B.

Answers.—1. To prevent their returning to the old location, moving them just as they are transferred, is a good plan; but you should also take the other precautions heretofore laid down in this department.

2. Yes, either time will do well; but in the case of the swarm, I would rather wait till the old queen had laid a few eggs.

3. The cooler the time the better (if in summer); and I would prefer to take a time when the largest number of workers were in the field. When they find the old home gone, they will come down to the hive.

☞ The Iowa Central Bee-Keepers' Association will hold their next meeting on June 20, at Winterset, Iowa. A full attendance is expected.

J. E. Pryor, *Sec.*
A. J. Adkinson, *Pres.*

☞ The members and friends of the Northern Michigan Bee-Keepers' Society, will hold a basket picnic at the apiary of Miss F. A. Bellamy, one mile west of Ionia, on June 19. Teams will be in waiting to convey, free of expense, all who wish to attend. Purchase your tickets to Ionia, but leave the cars opposite the prison grounds. Miss B. requests that you bring your wife or husband, as the case may be, and also that you drop her a postal, notifying her of your intention to be present, in order that ample provision may be made to convey all from the trains. Come on the morning train and return in the afternoon. F. A. Palmer, *Sec.*

S. J. Youngman, *Pres.*

☞ The Mahoning Valley Bee-Keepers' Association will hold its next meeting at Newton Falls, O., on June 6, 1884. It is desired that a display of apiarian supplies and samples of honey be made at that time. Mr. Hammon, of Bristolville, and Mr. C. R. Page, of Streetsborough, will read practical essays on topics pertaining to bee-keeping.

E. W. Turner, *Sec.*
L. Carson, *Pres.*

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., June 2, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. Chas. F. Muth.

NEW YORK.

HONEY—Present quotations are as follows: Fancy white in 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market.

BEESWAX—Scarce, and sells readily at 36@38c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—Choice white comb honey in 1 lb. sections brings 18c; in 1¼ to 2 lb. sections, quotable at 16c. Comb honey discolored and in undesirable shape is selling at 10@12c. Extracted honey is in light demand at 6@8c. Manufacturers of syrups and bakers say that the low price of sugar is the reason why they do not use as much honey as formerly. There is very little desirable comb honey on the market.

BEESWAX—Is scarce and fancy yellow brings 38c. Good beeswax, but dark, and having more or less of refuse matter in it, quotable at 30@33c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—A little new extracted is on the market, but is not receiving much attention, buyers being rather timid. Several small lots of old extracted arrived within the week, mainly off quality, and the same are offering at low figures. Some very choice old extracted was sold at 7c., which is at present an extreme figure. The demand is very light, and the tone of the market weak. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 6@7c; dark and candied, 4@5c.

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—There seems to be no limit to the demand for choice white comb 1-lb. and 2-lb. sections, if in good condition, at 15c to 16c, and the supply is hardly equal to the wants of the trade. Dark and irregular combs can be bought at any price above extracted, and holders would be glad to get that. Extracted is in fair demand, 7c to 8½c, according to quality.

BEESWAX—Small lot sold to-day at 35c. None to speak of in the market.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8½c.

Geo. W. Meade & Co., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 25
" 200 colonies (420 pages)...... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

"THE SON OF MONTE-CRISTO." being the sequel to "THE WIFE OF MONTE-CRISTO," and the end of the continuation of Dumas' masterwork, "The Count of Monte-Cristo," just published by T. B. Peterson & Brothers, Philadelphia, Pa., at 75 cents. Romantic in the highest degree, powerful in the widest sense of the term, and absorbingly interesting, it is a work absolutely without parallel at the present day. Every chapter has a strong and stirring feature of its own, while all the legions of intensely thrilling incidents are as original and surprising as they are strong.

◆

☞ Price Lists on our desk:

W. G. Russell, Millbrook, Ont.
D. Kauffman, Needy, Oregon.
E. B. Weed, Cincinnati, O.
Derr & Kreider, Sterling, Ill.
C. D. Duvall, Spencerville, Md.

BEST IN THE MARKET.—Send orders for the I. X. L. Extractor. The demand is heavy, but I ship them promptly. Price for the L. frame, including Knife, only $8.00.
23A1t W. C. R. KEMP, Orleans, Ind.

GIVEN FOUNDATION.—As I have purchased a Given press, I will make Foundation on the same, this season. Will take Beeswax in exchange for Foundation or work it up for two-fifths.
23D4t A. WORTMAN, Seafield, White Co., Ind.

ONE-PIECE SECTIONS $5 per thousand. Langstroth, Simplicity and Chaff Hives, Comb Foundation, Smokers, and a full line of Apiarian Supplies.
DERR & KREIDER,
23AB4t Sterling, Whiteside Co., Ill.

WHITEWOOD OR BASSWOOD SLICED SECTIONS, 4¼x4¼. A decided success. Can be used in Cases or Frames; $2.00 per 1,000. Hives and Cases good and cheap. Address N. E. DOANE, Pipestone, Berrien Co., Mich. 16D4t

Bees, Bees! and Eggs, Eggs!

One to 200 Colonies of Italian Bees For Sale.

1 to 10, at $6.50 each; 10 or more, at $6.00 each. Tested Queens after June 1, $2.00 each. Also Eggs for hatching, from choice stock of White and Brown Leghorns, at $1.50 per set of 13 Eggs. Send Card for Price List and reference. Address to
WM. LOSSING, HOKAH, Houston Co., MINN.
23A1t

HEADQUARTERS
FOR
HIVES AND SECTIONS.

We make the All-in-one-Piece Section with the V. Groove. Send for Circuliar and Price List of Apiarian Supplies. **W. B. STONE & Co.,**
23Atf N. Lansing, Mich.

HIGH SIDE-WALLS!

On or before June 10, all ordinary sized frames of Eureka Comb will be for sale at 15 cents each. Langstroth Frames in stock. Other sizes subject to slight delay. This includes a sheet of comb with higher side-walls than any now in use, on which a swarm can be placed with safety. It has a well-made frame. Samples free. Now ready.

A sample of the Eureka Queen-Cage free to dealers. Address,
E. H. WEED, 95 W. Second St. Cincinnati, O.
Or, A. H. NEWMAN, Chicago, Ill.
CHAS. MUTH, Cincinnati, Ohio.
23A1t

Syrian & Italian Queens

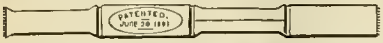
BY RETURN MAIL.

Tested, $2.50 each. Untested, Single Queen $1.00. Six for $5.50. Twelve for $10.00. Cook's Manual (cloth) with order for Queens, only 90 cents. Safe arrival guaranteed.

I. R. GOOD,
23Dtf SPARTA, TENN.

"BOSS" ONE-PIECE

SECTIONS.



We have again increased our capacity for making the "BOSS" ONE PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS**, to

ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.,
49BCtf Watertown, Wis., Dec. 1, 1883.

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1ABly Lock box 995. Belleville, St. Clair Co., Ills.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1884.

6 Warranted Queens for $5.

Write for Circular. **J. T. WILSON,**
1BC18t MORTONSVILLE, KY.

BE SURE

To send a Postal Card for our Illustrated Catalogue of APIARIAN SUPPLIES before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.

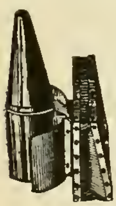
J. C. SAYLES,
51D15t 1B5t HARTFORD, WIS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

SECOND TO NONE!—ITALIAN Queens and Nuclei. For prices see advertisement for April 30th.

W. C. LESTER, Washington Hollow, N. Y.
21A4t

BINGHAM SMOKERS.



I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

NEW AND USEFUL

Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
1Ctf 12Btf DUNDEE, Kane Co., ILL.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 5 cents per pound** above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

BEESWAX.

I pay **34c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

HEAD-QUARTERS

IN THE WEST

For **Apiarian Supplies** of every description. Send for 1884 Price List before purchasing elsewhere.

BRIGHT BROTHERS,
10C4t MAZEPPA, Wabasha Co. MINN.

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to

Ctf A. I. ROOT, Medina, O.

TESTED QUEENS, $2; untested, $1; 4-frame Nuclei, $3.50 and $4.50. Mississippi Wax Extractor, $3. OSCAR F. BLEDSOE, Grenada, Miss.
21C12t

SMITH & SMITH

Want to give away 5,000 of their Illustrated Catalogue and Price List of **Bee-Keepers' Supplies. Special Attention** given to the

Simplicity One-Piece Section,

Also Hives, Smokers, Foundation, etc.

SMITH & SMITH,
6D10t KENTON, Hardin Co., OHIO.

Bees! Queens! Nuclei!

INSTRUCTION IN BEE-KEEPING.

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

QUEENS.—I breed Queens by the best methods, and from the best stock. Queens ready a May 20th. Untested, $1.00; tested, $2.00; sele tested, $3.00.

NUCLEI, with untested Queen, $3.50; with tested Queen, $4.50; with selected tested Queen, $5.50.

INSTRUCTION.—July 7, 1884, I shall begin nstructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address, **O. CLUTE,**
10Dtf IOWA CITY, IOWA.

Bee Hives

AND

SECTIONS.

NEW SHOP AND NEW MACHINERY !!

The Largest Manufacturer of Bee Hives Sections, etc., in the World!

Our capacity now is a **CAR-LOAD** of goods daily. Hives manufactured from soft white pine, and sections from white basswood. Send for our new Illustrated Price List for 1884. It is **very important** you should have our new List before ordering, as prices are arranged differently from last season.

G. B. LEWIS,
1BCtf WATERTOWN, WIS.

COMB FOUNDATION MILLS.

The "Best" and "Cheapest" in the market. Send for Sample and Price List free.

PAUL SPOERKE, Fond du Lac, Wis.
14Dtf

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

11,000 SOLD SINCE 1876.

12th Thousand Just Out!

11th Thousand Sold in Just Four Months!

2,000 Sold the past Year.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
State Agricultural College, LANSING, MICH.
18C7t 20D12t

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(BEFORE.)

DR. DYE'S

(AFTER.)

ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES are sent on 30 Days' Trial TO MEN ONLY, YOUNG OR OLD, who are suffering from NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES, and all those diseases of a PERSONAL NATURE, resulting from ABUSES and OTHER CAUSES. Speedy relief and complete restoration to HEALTH, VIGOR and MANHOOD GUARANTEED. Send at once for Illustrated Pamphlet free. Address

VOLTAIC BELT CO., Marshall, Mich.
6D1y

Don't Fail to Send to the inventor and manufacturer of the **Bailey Swarm Catcher,** for Circular and Price List of Catchers and Bee Supplies.

16D4t **J. W. BAILEY, Ripon, Wis.**

GIVEN COMB FOUNDATION

And Choice Queens a Specialty.

Circulars and samples free. Send for them. It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.

G. H. KNICKERBOCKER,
23eowtf PINE PLAINS, N. Y.

ITALIAN BEES AND QUEENS.

Send for Price List to

D. B. BROWN, DES MOINES, IOWA.
10D7t

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,

7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.

4A1y

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf J. VANDERVORT, Laceyville, Pa.

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine.

4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.

Price, 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.

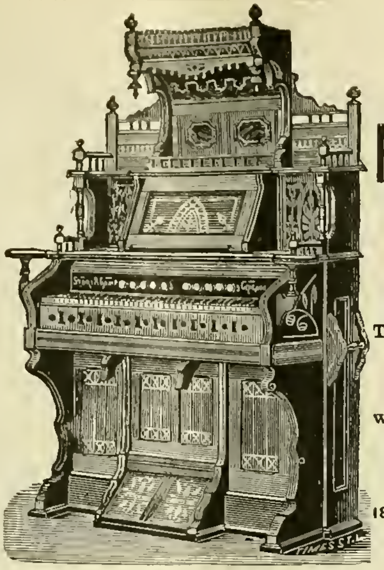
923 West Madison Street, CHICAGO, ILL.

Bees, Hives, Extractors, Smokers, Dadant Foundation, and other Supplies. ARTHUR TODD, Germantown, Philadelphia, Pa. 19A5t

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.

18Atf **HENRY ALLEY**, Wenham, Mass.



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Manufacturers and Wholesale Dealers in

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Estey,
Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.

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STORY & CAMP,

188 & 190 State Street,
CHICAGO.

203 N. Fifth Street,
ST. LOUIS.

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.

MRS. FRANCES DUNHAM, De Pere, Wis.

Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.

Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.

Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.

All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.

Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNHAM: Kenton, Ohio, Dec. 29, 1883.

After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.

I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is to me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to

FRANCES DUNHAM, De Pere, Wis.

2BCtf

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."

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We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

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Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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APIARIAN SUPPLIES,

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1868. 1884.

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I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey	$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

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I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

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And be SURE to state whether or not you have my Circular for 1883.

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New and Enlarged Edition OF BEES and HONEY,

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Management of an Apiary for Pleasure and Profit; by

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It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

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FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street, Pa., May 8, 1884.

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Bingham & Hetherington Honey Knife, 2 inch		1 15

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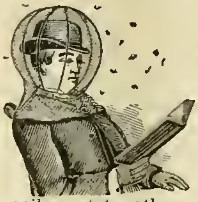

There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

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A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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AT BED ROCK PRICES.

COLONIES—8 Langstroth Frames, in light shipping box	$ 4.50
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NUCLEI—2 or more, 2 frame, with tested queen	2.00
2 or more, 2 frame, with untested queen	1.50
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After June 1st, 25 per cent. off.

After June 1, tested, per dozen	12.00
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For further information, send for Circular.
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Automatic Honey Extractor AND SMOKER.

Send for descriptive Circular and Prices to

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20Atf WYOMING, N. Y.

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THE WEEKLY
BEE JOURNAL
ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago. Ill., June 11, 1884. VOL. XX.—No. 24.

THE WEEKLY EDITION
OF
THE AMERICAN
BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1**.

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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☞ The Southwestern Iowa Bee-Keepers' Association, will meet in Corning, June 28, 1884.
W. J. OLIVER, *Sec.*

THE AMERICAN
BEE JOURNAL

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We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

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Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)	4 00..	3 00
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Quinby's New Bee-Keeping.	3 50..	3 25
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Kansas Bee-Keeper	3 00..	2 75
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New Eng. Apiarian, (W.W.Merrill)	2 75..	2 50
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Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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Write for SAMPLES FREE and price list of supplies, accompanied with **150 COMPLIMENTARY,** and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON.
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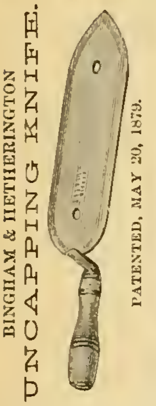
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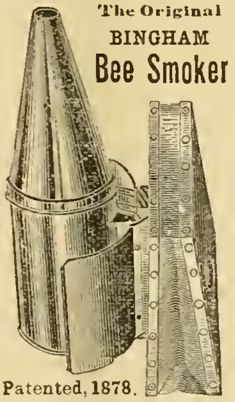
BINGHAM
Bee Smoker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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JUNE 11, 1884. No. 24.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Nomenclatures in Bee-Keeping.

Mr. S. Corneil has sent us the following criticism on the use of the word "stock" for colony. He says:

> On page 67 the Editor says, "A *colony* should never be called a *stock*." According to Horne Tooke, *stock* and *stuck* are two of the forms of the past participle of the Anglo-Saxon verb *stician, to stick*.
>
> After mentioning several different senses in which *stock* is used, Dr. Trench asks: "What point in common can we find between them all? This: that they are all derived from, and were originally the past participle of the infinitive, *to stick*. * * * and they cohere in the idea of *fixedness*, which is common to every one. Thus the *stock* of a gun is that in which the barrel is fixed; the village *stocks* are those in which the feet are fastened."
>
> *Stock* in trade, the *stock* of a farm, *stocks* or public funds, *stock* of a tree, family *stock*, etc., are all explained by Dr. Trench with reference to the idea of *fixedness*. In this sense *stock* is appropriately used as a term for a family of bees hived and *stuck* or *fixed* on a new stand. It seems to be even a better term than *colony*, because the latter implies dependence upon, or connection in some way with the parent body—a circumstance which does not exist when a swarm in the normal condition is hived and placed in a new location.
>
> On turning to the writings of authors of books on bee-keeping, and the best educated contributors to the bee-papers, I find that they use the word *stock* in the same sense as the Editor of the BEE JOURNAL uses the term *colony*. So I think we may say that the usage of a majority of the leading writers is in favor of retaining the word *stock*; and if I have been successful in showing that it is properly so used, we must ask the Editor to "reconsider the question."
>
> The words "rack," "case," and "crate," as applied to supers for storing comb honey, require to be defined. At present there is a good deal of confusion in the use of these terms.
>
> S. CORNEIL.
>
> Lindsay, Ont., Feb. 21, 1884.

We have been unable to spare the time until now to reply to the above criticisms, as well as space to give the article an earlier insertion. As the subject is in no wise injured by the delay, we presume our valued correspondent will excuse it.

It is one of our principles to ever hold ourself ready and willing to reconsider any position we have taken on controversial subjects; but we must say that we require stronger arguments than those presented above to induce a change of opinion. We are quite slow in making up our mind, and do so only upon a review of the whole field *before* expressing our views, and hence we very seldom have to change. Our correspondent says that many prominent authors and correspondents for Bee-Papers have used the word "stock" for colony, and that it is, therefore, right to continue its use.

Many prominent writers for bee-papers and authors have blundered in the use of the adjective "apiarian" as a noun, instead of apiarist! They have also used the term "artificial comb" instead of comb foundation! and many other very foolish expressions. Shall we, therefore, adhere to such blunders when the fallacy of their use is exposed?

The only argument advanced by Mr. Corneil, is the idea of "fixedness" to be conveyed by the use of the word "stock," and he adds: "In this sense *stock* is appropriately used as a term for a family of bees hived and *stuck* or *fixed* on a new stand." If a "family of bees" are "stuck" or "fixed" on a stand, we fear they would not be very profitable to the apiarist. If anything is "stuck" or "fixed" on the stand, it must be the *hive* or *box* containing the bees—and not the "family of bees." That box or hive might be "fixed" there, by being waxed, glued or nailed—but the family of bees would be free to rove over meadow or woodland in search of nectar. That idea of fixedness has "stuck" our correspondent in the mud, and "fixed" the word "colony" as the true word to be used to represent "a family of bees."

We hope we have "fixed" this matter firmly in the minds of our readers, and that they will hereafter use the word colony instead of stock, stand, hive, gum, etc.

◆

☞ We have received the Premium List of the Indiana State Fair, to be held at Indianapolis from Sept. 29 to Oct. 4. The premiums in the Bee and Honey Department amount to $57 and a diploma—not as large as they should be, but better than they might have been. Here it is:

Comb Honey in the most marketable shape, not less than 20 lbs.	$4.00	$2.00
Extracted honey in the most marketable shape, not less than 20 lbs.	4.00	2.00
Display of honey—the product of one apiary of the present year	4.00	2.00
Display of wax, not less than 10 lbs.	2.00	1.00
Display of apiarian supplies	4.00	2.00
Apparatus for the manufacture of comb foundation, to include all necessary articles for its manufacture.	4.00	2.00
Comb foundation for use in the brood chamber	2.00	1.00
Comb foundation for surplus honey	2.00	1.00
Honey extractor	2.00	1.00
Wax extractor	2.00	1.00
Honey vinegar, not less than one gallon	2.00	1.00
Section for surplus honey	2.00	1.00
Display retail pkgs. for extracted honey	2.00	1.00
Honey cake or cakes	2.00	1.00
Collection of honey plants, properly labeled in order, with dates of bloom	10.00	Dip.

◆

☞ The Indiana *Farmer* says: "Now, within the next six weeks, are our brightest hopes to be realized or blasted for the year 1884. Who is ready? and, who not? We are pleased to notice many of our friends, profiting by their dearly bought lesson of last season, are fully prepared to reap the harvest when it comes; and, should the favorable weather of the past few days continue, we shall be amply paid for all our care and patience."

◆

☞ In the next to the last paragraph of W. H. Stewart's article, on page 345, "*imprisonment* comes not of the race in common, etc.," should read "*improvement* comes not, etc."

Large Bees—A Humorous Statement.

Mr. J. M. Shuck, of Des Moines. Iowa, has sent us the following humorous article concerning large bees, cut from a periodical.

Those who enjoy that kind of reading will laugh at the many humorous points made. Here is the article; take it for what it is worth, payable in smiling, either audibly or mentally, as may best suit the reader's pleasure:

> It appears that some ingenious person has invented a method of producing bees of almost any desired size. If two cells, each one of which contains an embryo bee, are knocked into one, the two bees are consolidated, and the result is a new bee, double the usual size. Of course, if this can be done there is practically no limit to the size of possible bees. By knocking four cells into one a bee four times the usual size can be made, and if an entire hive of embryo bees is subjected to this consolidating process, we should have a bee about the size of a turkey—a size hitherto attained only by one species of bee, known as the Presidential bee, an insect inhabiting the bonnets of eminent statesmen, and never by any chance producing honey.
>
> Before recklessly undertaking to enlarge our bees, we ought to ascertain what effect their increase of size will have upon their power and disposition to gather honey. The bumble-bee is much larger than the honey-bee, but he is certainly not a success. An insect so dull (that he fancies that "bumble" is spelled with an "h," and so lazy that he makes less honey in a whole season than a honey-bee makes before breakfast on a spring morning), is by no means a model. It may be suggested that the bumble-bee's lack of success in producing honey is due not laziness, but to the inability of his wings to carry with ease the weight of his body; but no one who has been chased by an angry bumble-bee will entertain this suggestion. It may also be suggested that the trousers pockets of the bumble-bee are so small that he can carry very little honey in them; but there is no evidence that this is the case. We simply know that the bumble-bee is bigger than the honey-bee, and gathers less honey. So, too, the wasp and the hornet are bigger than the honey-bee, and they make only enough honey for their bare necessities. Evidently the rule of nature has hitherto been, that the larger the insect the less the honey.
>
> Now, if the honey-bee, after being developed into a two or three-pound insect, is going to imitate the laziness of the bumble-bee, what shall we have gained? No one will care to have a score of big, lazy bees dawdling about his premises, upsetting furniture and children by flying against them, and tripping people up by concealing themselves in the grass. We shall have to go armed with big clubs to keep off the bees, and though some sport may be obtained by shooting bees on the wing, there would be no sport whatever should the bees undertake to hunt the sportsman with stings capable of penetrating anything less than an inch of chilled steel armor.
>
> Even if the mammoth bees should gather honey in quantities proportioned to their size, we should have no use for such a vast amount of honey. It is true that honey is used to a small extent in the arts, and that when one has a personal enemy addicted to buckwheat cakes, a horrible revenge can be obtained by sending him a bottle of pure Berkshire county honey to eat with them. Still, there is no such demand for honey as would justify an effort to largely increase its production.
>
> Our bees are very well as they are. If a hive is kept on a shelf over the front door, and upset on a book agent, the bees will perform as much work as is necessary. To upset a hive of four-pound bees, in like circumstances, would be simply murder, and would in many cases involve the trouble of a trial and acquittal in a court of law. It might be well to keep large bees in Cincinnati for the encouragement of jurors, and of respectable citizens who call meetings at which people are incited to rioting; but in this region we are satisfied with our local bees, and will decline to have them enlarged.

Bees and Honey at Fairs.

Mr. H. B. Cony, of Augusta, Maine, Chairman of the Committee on Exhibits at the Maine Bee-Keepers' Association, gives the following address to the bee-keepers of Maine, in the *Home and Farm*, relative to making appropriate exhibits at the coming Fairs:

> Bees and honey formed one of the attractions at the State Fair held at Lewiston last fall. For 1884 the State Society gives us the same amount in premiums, and promise us, should we desire it, a tent or separate building in which to exhibit, with room for those who come from a distance to lodge should they wish; each person to provide his own bedding, the society furnishing the necessary straw for filling the beds. Now, why not all of us bee-keepers attend and carry something with us to help out the display. In so doing we can be one of the attractions, and every evening we can have a bee-convention of practical bee-keepers, with stock and tools on hand to illustrate our latest ideas.
>
> The Eastern State Fair, which is to be held at Bangor, gives us $30 for bee-premiums, and promises us everything in their power to help us out, and seem disposed to consider this one feature of their next exhibition. I could have named a sum much larger than this, which they would have cheerfully given, had I been sure of a large display. I was more than pleased with the eagerness with which the managers of the Fair grasped at this feature, and the disposition which they manifested to do us justice in every particular.
>
> Now let us one and all, if possible, attend one or both of these Fairs, taking one or more articles to add to the display. It should be our aim to make honey a staple product. To this end let all endeavor to popularize the consumption of honey by the masses, as well as to raise the standard of production by applying correct principles and progressive art to the management of the apiary. These displays are the best educators of the people that have yet been devised.
>
> I would ask as a favor that some one in every town or city would send me the names of all the persons keeping bees in their vicinity, with each one's post-office address, so I can address them in regard to the coming exhibition. I shall have a supply of premium lists as soon as published, to send to all who wish. Any information in regard to the manner of making the entries, or any other matters in regard to the different Fairs given on application.

☞ Picnics are now the order of the day. The bee-keepers of Hancock and Shelby counties, Indiana, held a picnic at the apiary of George Cole, near Fountaintown, Ind., last Saturday.

Convention Notices.

☞ The Iowa Central Bee-Keepers' Association will hold their next meeting on June 20, at Winterset, Iowa. A full attendance is expected.

J. E. Pryor, *Sec.*
A. J. Adkinson, *Pres.*

☞ The members and friends of the Northern Michigan Bee-Keepers' Society, will hold a basket picnic at the apiary of Miss F. A. Bellamy, one mile west of Ionia, on June 19. Teams will be in waiting to convey, free of expense, all who wish to attend. Purchase your tickets to Ionia, but leave the cars opposite the prison grounds. Miss B. requests that you bring your wife or husband, as the case may be, and also that you drop her a postal, notifying her of your intention to be present, in order that ample provision may be made to convey all from the trains. Come on the morning train and return in the afternoon.

F. A. Palmer, *Sec.*
S. J. Youngman, *Pres.*

☞ The joint session of the Bee-Keepers' Associations of Hendricks and adjoining counties will be held at North Salem, Ind., June 19, at the apiary of Davis Gully. All bee-keepers are cordially invited to attend. Ample provision will be made to haul all well-filled baskets to the grounds.

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed).

N. P. Allen, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

The Honey-Bee.

EMMA BASSETT HENNESSEY.

"Butter and honey shall he eat, that he may know to refuse the evil, and choose the good."—ISA vii, 17.

Where spicy shrub and clinging vine
Within the garden's bound,
Seemingly coax the sun to shine,
A gold-mine I have found.

And all about a busy camp
Augments the yellow hoard,
And guards from every passing tramp
The treasure snugly stored.

But, see ! no selfish law doth hold
Within the busy hive ;
Benevolence pays out the gold
For which no brothers strive.

The greatest number's greatest good—
Such is the wise decree
That binds the noble sisterhood,
Of queen and honey-bee.

So quietly each busy life
Lived to its quiet end.
For individu'l fame no strife—
As one the colors blend.

And yet, proud man—great architect,
Bring compass, square and rule,
And with your measurements, detect
The laws learn'd in this school.

With nicety of hand and eye,
Gauge me this matchless skill—
This indis'luble unity
Of multitud'nous will.

These walls so delicate, yet strong ;
So uniform and true :
These cells that predetermine long
What sort of life slips through.

And from your laboratories come,
Ye chemists grave and gray !
Translate for me the hive's soft hum—
Its secrets give away.

The mysteries of death and life
Perchance are waiting here.
The problems that occasion strife
Are surely now made clear.

Ah, well ! since lab'ring brains evolve
No knowledge like the bee's,
Woman is tempted to resolve
Ne'er to curtail her ease,

Nor yield small homage to those schools
Which sap the springs of youth,
But bee-lines take, for life's best rules
To fountain-heads of truth.

—Manhattan, Kansas.

For the American Bee Journal.

Those Six-Frame Hives.

G. M. DOOLITTLE.

I am asked by several to explain still farther about those six-frame hives I spoke of on page 69, as that article did not go far enough into the details so that all understood it.

In preparing the bees for winter where but 6 frames are used in the hive, these frames occupy but 9 inches of space, as 1½ inches to each frame is the space I allow both in winter and summer. These 6 frames are either put close to one side of the hive next to the slotted division-board, and a movable division-board placed next to them, or they are left in the middle of the hive and a movable division-board placed each side of them.

These movable division-boards are simply an inch board made to fit loosely the inside of the hive, except that they do not reach the bottom within ½ of an inch or so. To the top of this board is nailed the top-bar of a frame, and then one of these boards, or "dummies" as some call them, will fit in the place of any frame in the hive. They are used solely for contracting the size of the hive.

After having the 6 frames fixed as above described, with these dummies, the cotton cloth is spread on the top (as I said on page 69), and down the sides over the slotted division-boards, just the same as would be done if the full 9 frames were used. Some hives have but 5 frames and a dummy, others 6, 7 or 8, as the case may be.

To make it plain, I should have said in my former article that this cotton cloth covering is in two pieces, each piece being long enough to cover the top of the brood-chamber and extend down one side over the slotted division-board; thus requiring two pieces 14 inches wide and 26 inches long, to each hive.

Thus it will be seen that there are two thicknesses of cloth over the bees, besides the chaff cushion. In the spring, when I wish to spread the brood, etc., all I have to do is to remove the cushion and lift up the strips of cotton cloth over the packing at the sides, when the frames are handy to manipulate. When I am through, the strips are spread back, and the cushion put on; and thus the bees are left snugly packed till they become so strong that they need combs put over in the 5-inch spaces at the sides, as I gave on page 69.

When the bees are wintered on 5 or 6 combs, they are so left till the combs are filled with brood and crowded with bees, when they are spread apart and an empty comb placed in the centre as needed, and so on till the "dummies" are all out, and the brood-chamber is filled with 9 frames of brood. This item of leaving the chaff packing all on during the changeable weather of spring is a great help in building up our bees in the spring.

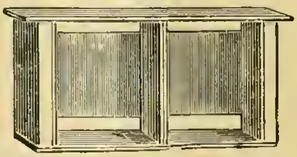
I am next asked about those slotted division-boards. These are made of clear lumber ¼ inch thick, and are kept in place by a saw kerf ¼ inch wide and ¼ inch deep, being cut on the inside of the hive 5 inches from either end. This saw kerf is made before the hive is put together, which is easily done by passing the boards over a saw set a little wabbling, and by having the saw-table raised so that the saw cuts but ¼ inch deep. If you do not have access to a buzz-saw, it can be done by hand by sawing in two places, and then trimming it out with a ¼-inch chisel.

When the hive is nailed together, these boards will slip down into the grooves cut for them. The slots should be placed in them so that one shall come at the top of the bottom tier of sections, just under the top-bar of the section, and the other at the bottom of the top tier of sections, just above the bottom piece to the top sections. The board should also be narrow enough so there shall be a ¼-inch passage way into the bottom of the bottom tier of sections, and the same at the top of the top tier of sections. In other words, make this board so that it shall take the place of two separators. I could give the exact size I use, but that would be of little use, as there are almost as many different sizes of sections as there are bee-keepers.

After you have once got these slotted boards right for the hive, you can slip one of them out to be used as a pattern. By adjusting the gauge on your saw-table so the wabbling saw will come just right, the slots are cut as fast as one can handle the boards. For a few as a trial, the slots can be cut with a carpenter's slitting-gauge.

If from any reason I wish to use this hive for extracted honey instead of comb honey, I remove these slotted boards, and then I have a 15-frame hive for this purpose, and in case of a large colony, it can be used as a two-story hive, which gives 30 frames, and which is generally ample room for any colony.

Again, I am asked the size of the sections which I use. I formerly used the section which is 6¼x5¼x2, outside measure. Two of these were placed in a two-box case with a separator nailed to one side, as shown in the illustration. These cases are now called "wide frames," I believe. I now use the same wide frames for sections; but instead of using the prize sections, I use three smaller sections in place of two, which gives a section 3½x6¼x2, outside measure, and weighing, when well filled, 1½ pounds. In all of the Eastern markets these sections sell at the same figure as the one-pound sections.



Two-box Case.

By the above engraving it will be seen that the top-bars of these wide frames project as does the top-bar to our brood frames. In the 5-inch space is nailed a cleat to either side of the hive, in just the right position, so that the first wide frame put in hangs on these cleats, as a frame hangs on the rabbet to the hive. Two nails are driven into the top of all these wide frames, one at each end, so as to project ¼ inch, and the next wide frame rests on them, thus preventing the killing of any bees when the wide frames are set one on top of the other.

These nails are also so driven that the open side of the wide frame is always inclined toward the slotted division-board; and thus they allow of a frame of unsealed brood being put behind them, as I gave directions on page 69. When no brood is in this space, a board which I call a "follower," is placed next to the wide frames of sections, which, by means of a wedge or key, is held firmly in place.

Thus it will be seen that 4 wide frames, or two tiers of sections with the follower and key, will just fill the 5-inch space at either end of the hive, behind the slotted division-board. I also now make a wide frame of the same dimensions as my brood frames, except that it is 2 inches wide. This frame holds 6 sections, 3½x5⅜x2, outside measure, which sections weigh when well filled 1¼ pounds.

When sections are inverted in the brood-chamber proper, as they are where but 6 frames are used, I generally use this size, although the others can be so used, yet not so handily.

Now, if you still do not thoroughly understand how my hive and sections are arranged, send 5 cents to the office of the BEE JOURNAL for a description of my hive; which is so plain that any of you cannot fail to understand it, and make a hive just like mine, if you so desire. However, if you have many hives to your liking, I would advise you to adopt the plans of using sections which I have given, to one or two of your own hives, and then if you are pleased, work your whole apiary that way. If not pleased, the experiment will have cost you but little.

Having answered several questions, I now wish the privilege of asking one. I wish to ask Mr. Isham (see page 135) if his bees ever gnaw or eat his wood separators? and if so, how he prevents their doing it? After using wood separators on several hives the past season, I am prepared to endorse them, if I can keep the bees from eating them. They do not warp or twist to bother me, but nearly one-half of those used last season are spoiled for further use by having from ⅛ to ¾ of an inch eaten off of them.

Borodino, N. Y.

For the American Bee Journal.

Bee-Keeping for Women.

MAHALA B. CHADDOCK.

Bee-keeping is too hard work for women. I say this as conscientiously as I would say that corsets are detrimental to health, or that tight shoes are injurious to the feet, and I say it with as little hope that it will do any good; for just as long as men admire small feet and slim waists, just so long will women go on lacing and cramping themselves; and as long as women in moderate circumstances are looking about for some way to earn a few dollars, there will be thousands of women bee-keepers.

If you must and will keep bees, I will help you all I can; and if any of you know of a better or easier way to do anything in the bee-yard, write it to me or to the BEE JOURNAL, and I will try it. I am daily in receipt of letters from beginners in bee-keeping, asking me how to kill moths, etc.

I quote from a letter I received today: "I have 3 colonies of bees, and they are in boxes, we call them 'gums;' the bees are troubled with moths—a little worm. I suppose you know more about it than I can tell you. I am taking bee-papers, but they are all 'Greek' to me. I know what 'frames' are, and what they are for; but how are they 'wired' or 'tinned?' What does 'foundation' mean? Where is the honey-board, and what is it for? Are Italians better than the common bees? What is 'foundation' made of? etc."

Now here is a woman who stands just where I stood 14 years ago; and for just such ignorant people these letters of mine are written. People with hobbies, people of experience, and people who think they know how to care for bees are requested not to read them.

Vermont, Ill.

For the American Bee Journal.

Prevention of Bee-Diarrhœa.

A. A. FRADENBURG.

I have read with much interest the articles on bee-diarrhœa. I believe all heretofore written is theory only. We have had theory hot, and theory cold; theory dry and theory wet. We have had ventilation upward, and ventilation downward; ventilation crosswise, and ventilation from corner to corner. Indigestion, dyspepsia, inflammation of the bowels, etc., have been advanced as the prime causes of diarrhœa; but all have been theories and no proofs. Now I will give the proofs first and theory afterwards. My proofs are sustained by 59 living witnesses.

Last fall I prepared 25 colonies for wintering in chaff hives, and 20 in two-story single-walled hives with bees in the lower stories and chaff cushions in the upper stories, and all on the summer stands. These 45 colonies graded all the way from very light to very good, both as to stores and quantity of bees. A few colonies I had marked "too light for winter;" but having too many irons in the fire, I did not get around to help them until winter had set in. All of these 45 had such stores as they had gathered—honey and pollen.

I took a long hive that holds a Langstroth frame crosswise, and in it I put 7 nuclei colonies by giving each 3 Langstroth frames, and dividing them with a half-inch division-board. The centre comb was empty, and the two outside ones well filled with clear honey. Special care was taken that no comb should contain any "pollen." This hive had a lid 5 inches deep, which space was filled with chaff cushions. The cushions were made of "white cotton cloth;" then I put a rough box without a bottom, but with a hinged lid, over this hive with about 4 inch space all around the part filled with chaff on the sides only. I gave the nuclei a passage out through the chaff space. Then I prepared 7 more nuclei precisely like the first 7, only their combs were about 11 inches square, and they were almost totally dry. They had no "pollen," and scarcely any honey, not to exceed 2 pounds in the whole 7, I think. One or two had 4 frames, the rest 3 each. I wish I could tell the weight and strength of each nucleus, but I cannot. They were all quite light, and I do not think the heaviest one would weigh 2 pounds. Some, I do not believe, would weigh 1 pound. I know that several of them would all hold to a Langstroth-frame comb and not be any double thickness.

I put the strongest ones at the end divisions of the hives. When I had these thus fixed it was already only a few days before real winter set in, and it was a cold winter too. I was often asked how my bees were standing it; and my reply was that I expected to find a large number dead. One day, when it did not seem quite so cold, I raised the lid off the rough box, then of the hive, and then one corner of the cushion—buzz z-z—down went the cushion, and down went the lids.

Towards the last of January we began to have some milder weather, but not warm enough to let the bees out. By Jan. 25 the situation began to be critical with the bees in all the regular hives; diarrhœa began to show badly in some, so that the bees were leaving the clusters and dying rapidly. I was becoming anxious for a warm spell, as I had in previous years lost over a hundred colonies by the dreaded disease; so I ought to know what it is.

But the long-wished-for day came just in time. Jan. 31 was bright, clear and warm, and the bees flew *en masse*. About 2 p. m. all of the 45 colonies had flown freely, and had nearly stopped, but the 14 nuclei, in the long boxes, scarcely showed any signs of life. Only one or two were flying any, so I raised the lids, took off the "white cushions" and turned up a corner of each cloth cover and left them so. In half an hour I looked out, and the first impression I got was that they were robbing; but upon getting nearer, I saw it was only a joyful play spell. An hour later and all was quiet.

I then went the rounds of the 45 colonies, every one had the spots of diarrhœa—diarrhœa pure and simple; it had the genuine color; aye, and the genuine smell. Some had it quite light, others very badly. Then I went to the 14 nuclei, got down close to them and looked carefully. I found two spots on one lot, and one only on the other. Then I could have waved my hat and shouted, "Eureka! Eureka! I have found it."

The true cause of diarrhœa: 45 colonies had pollen and the 45 had diarrhœa; 14 had no pollen and 14 had no diarrhœa. I fully believe that the 3 spots found on the nuclei were dropped by bees from other colonies, as they were flying over. The 14 were dry, bright and healthy; they are all alive to-day, and are building up as fast as could be expected.

But you ask: "how did those live which had no stores?" Why, I simply put lumps of pure candied extracted-honey right on the frames, over the cluster, about once in two weeks, that

was all. Of my 59 colonies some are weak, but *none are dead.*
Port Washington, O., May 12, 1884.

For the American Bee Journal.

Western Fair, London, Ont.

WM. H. WESTON.

The Western Fair, which is to be held in this city on Sept. 22 to 27 inclusive, has adopted the following price list. I might just remark in reference thereto, that this is the first year the Fair directors have formed a separate class for bees, honey, and apiarian supplies; and it being their first attempt, they have done handsomely, hoping thereby to draw a large number of exhibitors from both Canada and the United States; and at the same time to educate the public in this very important industry.

For the benefit of exhibitors from the United States, the directors are to make arrangements with the Custom authorities for the free passage of all goods for exhibition. The Western Fair is the most important one held in Canada, and always draws a large concourse of spectators. The following is the price list:

Queens and colonies cannot compete for more than one premium.

	First.	Second
Display of Comb Honey in the most marketable shape, product of one apiary in 1884	$10.00	$5.00
Display of Extracted Honey in the most marketable shape, product of one apiary in 1884	10.00	5.00
Display of comb honey in the most marketable shape, by a lady, product of her own apiary in 1884	10.00	5.00
Display of Extracted Honey in the most marketable shape, by a lady, product of her own apiary	10.00	5.00

The first prize in the above section is offered by James Watson, Esq.

Comb Honey, not less than 20 lbs., quality to govern	$4.00	$2.00
Extracted honey, not less than 20 lbs., quality to govern	4.00	2.00
Best Granulated Honey	2.00	1.00
Crate of Comb Honey, not less than 20 lbs., in best shape for shipping and retailing	4.00	2.00
Colony of Bees, properly named, must be the progeny of one queen, and exhibited in such shape as to be readily seen on two sides. Purity of race, docility, size of bees and numerical strength to be considered	5.00	3.00
Display of Queens, to be put up in such shape as to be readily seen by visitors (blacks not to compete)	3.00	2.00
Best marked Queen Bee, bred in Canada	3.00	2.00
Greatest variety of Queens put up in same shape as for display of queens	Diploma	
Best Bee Hive for all purposes in the apiary	3.00	2.00
Best Bee Hive for Extracted Honey	Diploma	
Best Bee Hive for Comb Honey	Diploma	
Honey Extractor	2.00	1.00
Wax Extractor	2.00	1.00
Foundation Mill	Diploma	
Foundation Press	Diploma	
Beeswax, not less than 5 lbs	3.00	2.00
Comb Foundation for surplus honey, not less than 3 lbs	2.00	1.00
Comb Foundation for brood chambers, not less than 5 lbs	2.00	1.00
Comb Foundation Machine, making best foundation for brood chamber, on the grounds	8.00	4.00
Best pound-sections, not less than 50	1.00	.50
Best one-piece section for honey	1.00	.50
Best dovetailed section for honey	1.00	.50
Package with labels for retailing extracted honey	1.00	.50
Bee-Smoker	1.00	.50
Bee-Feeder	1.00	.50
Honey-Knife	1.00	.50
Display of apiarian supplies	4.00	2.00
Largest and best display of honey-bearing plants, properly named and labeled	Diploma	
Queen Cage, such as is admitted to the mails by postal laws	1.00	.50
Honey-Vinegar, not less than 1 gallon	2.00	1.00
Honey-Wine	2.00	1.00
Extras		

London, Ont.

Read before the Southern Cal. Convention.

The Honey-Interest in California.

J. E. PLEASANTS.

You are all aware of the wonderful progress made in apiculture in the last quarter of a century. Of all the modern improvements I will only mention three of the greatest: The movable comb hive, the extractor, and the artificial comb; but these three have revolutionized bee-keeping, for with their use the quantity of honey is greatly increased. But, notwithstanding the great increase, the demand for honey to-day is greater than the supply, and so it will continue; for the more easily an article is produced, the cheaper it can be sold, and the cheaper it is sold the nearer it is brought within the reach of all.

As a nation, we should rejoice that America leads the van in all that relates to apiculture; and as the demand for honey increases, America is called upon to supply that demand. I am sure that California will, in the future as she has in the past, come to the front with her tons upon tons of unsurpassed and insurpassable honey. All of us will concede that the last 3 or 4 years have been unpropitious for the bee-business in this State; but with all the unfavorableness of the seasons, California has produced enough for home consumption and some to spare for our cousins over the seas, whose palates we love to tickle with our sweet product. The fear of glutting the market of the world with good honey is as absurd as to think of glutting it with wheat. Honey put up in a neat and marketable package will always bring remunerative prices. The honey interest is an industry which deserves encouragement from all. In a good year it brings into this district alone over half a million of as virgin dollars as those which the sturdy miner delves from the earth while the industrious bees extract it out of the blossoms which would otherwise go to waste on the desert air. Read over the list of premiums offered by the managers of the Fair of the Sixth Agricultural District, and see what you find there to encourage this great pursuit. Not one dollar.

This great industry has its enemies among the fruit growers. While admitting that bees are injurious to the raisin industry, I will defend them in most of the charges brought against them by their enemies, who oftentimes do not know the difference between a bee and a yellow-jacket. The damage done to fruit is always commenced by other insects or birds, but it is invariably laid at the door of the bee. Sometimes the fruit grower knows so little of the physiology of the bee that he accuses him of gnawing through an inch board to get to his fruit. So the cry is, "The bee must go." If not, they will be trapped and destroyed. Such work is both cruel and unlawful. I am opposed to keeping bees in the valleys between May and November, where there are orchards and vineyards. Generally the bees which are in the valleys are not owned by professional bee-keepers, but by men who just keep a few for their own use. It is to the interest of professional bee-keepers to confine bees to the mountains exclusively, as the honey produced in the valleys is of inferior quality, and therefore injurious to the reputation of California honey. I am confident that the majority of the true bee-keepers will coincide with me.

As we all know, there are always two sides to a question; for, once upon a time a keeper of bees in the mountains, who for years had been quietly pursuing the even tenor of his way, had his tranquillity interrupted by a tiller of the soil, who moved into the vicinity and planted his vines and melons. In the course of time the pioneer's bees fed upon the sour grapes and melons of his neighbor, and as it was not their natural food, they became diseased and perished. Whereupon their owner became enraged and called an anti-fruit-growers' meeting, the decision of which was that the husbandman must go.

Query: Will he go?

Somerset Co., Maine Convention.

The Somerset Bee-Keepers' Association held a convention at Athens, Me., on May 7, 1884, which was characterized with much interest to the bee-keeping fraternity in this and western Piscataquis county. There were about 25 members present.

The forenoon was occupied in discussing the methods of wintering bees, and relating the experiences of members of their successes the past winter. This subject was introduced by Isaac Hutchins, of Wellington, who read a paper on "Conclusions drawn from wintering bees on the summer stands the past winter." There was some diversity of ideas pertaining to wintering, by the members, but two methods were most fully endorsed: 1. In warm, dry cellars; 2. On the summer stands with some outside protection, as of chaff or sawdust, with holes made through the combs for bees to pass through from frame to frame. It was claimed that holes were preferable to sticks laid on top of frames, as bees would not pass up over the frames if the temperature within was at all low.

In the afternoon an election of officers resulted in re-electing Wm. McLaughlin President; Wm. Lawrence, Secretary; Isaac Hutchins, Treasurer; W. H. Norton, S. J. Ward, G. H. Allen, H. J. Fogg and S. H. Whitehouse, Vice-Presidents, from as many different towns. Then followed an "inquiry meeting," on the management of bees from this time until our next meeting in August. Mr. Norton would prevent swarming and work for surplus honey until after the honey season, then divide the colonies and build them up for winter. If bees become too numerous, he would give them more room. He would induce bees to work in sections, by taking out a frame of sealed honey, uncap it, and then hang it in the centre of the frames when the bees are rearing brood, and the bees will remove all that honey up into the sections in an incredibly short time, and thus continue to work there.

Dr. Brown would not use a smoker at all, but with some anise essence, syrup and chloroform sprinkled over them and at the entrances, he can do anything with them. He also gave a method of preventing moths by killing the millers before entering the hive.

Mrs. Wm. Lawrence would induce bees to work in the sections by cutting out a small piece of comb with drone brood, and fasten it in a section, and it is remarkable how quickly the bees will go up and work with a "vim" in the sections. She also would not use comb foundation in surplus sections at all, but use small pieces of empty comb, because bees will take to it better; and also where comb foundation is used there is always a tough, hard partition in the honey which is not palatable, and is not so nice as that made by the bees.

Mr. Hutchins gave many good suggestions. He is a live, progressive and veteran bee-keeper. His apiary consists of nearly 50 colonies in bee-houses packed with sawdust, both winter and summer, all finished and painted on the outside, placed in due form, which looks like a miniature village.

Others gave many suggestive facts and incidents in bee-management. At the close it was voted to hold the next meeting at W. H. Norton's, by his invitation, at North Madison, Me., on August 20, 1884. He proffers free entertainment to all. The time now is very favorable for examining bees, and for laying plans for the fall and winter's campaign. Let there be a grand rally.

W. McLaughlin, *Pres.*

For the American Bee Journal.

Queen Fecundated in a Cell.

GUYTON BROS.

On page 296 of *Gleanings*, we saw Mr. B. F. Lee's accounts of fecundating a queen in confinement. We thought of trying the plan. As an embryo queen in the larval state absorbs food at her posterior, we thought it might be possible that she could be fecundated while in that state; and, if so, the feasibility of so doing would be of paramount importance to all bee-keepers; we tried it.

The *Modus Operandi*: We had four cells nearly ready for capping; one of them we inverted and squeezed into it the contents of a drone larva 5 or 6 days old. We did not do as Mr. Root advises: "scooping" out the drone food and giving it to the queen larva; for that was taken away with the larva. Into the other 3 cells we cut lids which opened downward, and likewise put the drone larva contents into each, then closed the lid and sealed it as well as we could. We did not do as Mr. Lee did—inoculating the queen larva with drone, but put the drone larva into the royal jelly just as close to the posterior of the queen larva as possible, that it might be absorbed before spoiling.

The royal jelly run through upon the larva in one of the 3 cells thus prepared, and was taken away with the larva. The other 2 cells were capped nicely. As we did not know the exact age of the larvæ operated upon, they hatched out one day sooner than we expected and one was lost. The other one had two combs about as well filled with eggs as could be expected for one day.

Like Mr. Lee, it does seem doubtful to us; but she is there, and laying as busily as if she had met a hundred drones. We have some under the same process now, which will hatch out this week, and we intend watching them very closely. We think of clipping one or two of them as they emerge from the cell.

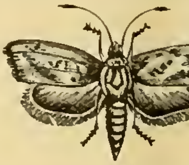
Waco, Tex.

For the American Bee Journal.

Bee-Moth.

A. C. CORSEY.

This formidable enemy of bees is not as well understood by many apiarists as it should be. The name is derived from the Latin *galaria cereana*—gallery wax so-called because the larvæ construct galleries in the comb.



Bee-Moth.

It is often seen about the hives during the day, but more frequently at night; and is often seen flitting about the candle or lamp. It is of a light grayish color, and is generally known by the name of miller.

It enters the hive at the same entrance as the bees, and deposits its eggs in some crack or crevice in the hive where the bees are unable to reach it. When the colony is weak, it will deposit its eggs in the combs, and the colony soon becomes a prey to its ravages. A strong colony will keep the combs free from these depredators.

The egg of the bee-moth, when hatched, produces a little worm which encloses itself in a case resembling white silk, which it spins around its body. It gradually increases in size, and feeds on the cells around it. As it increases, it enlarges its gallery by cutting the cell away before it. The gallery, as well as the insect, is impervious to the sting of the bee, but if one drops from its gallery, it is seized by the nape of the neck and forcibly ejected from the hive by the bees.

In the course of three weeks the larvæ or worm stops eating, and encloses itself in its silken case. It, however, soon deserts its case, and plumes its wings for flight. Many devices have been invented called moth-traps, to prevent its entering the hive, but all have proved failures. There is but one effectual moth-trap, and that is a strong colony of bees. Moths never disturb a strong colony where the hive is properly made, so that the bees can pass all around their work.

Cucamonga, Cal.

For the American Bee Journal.

More About the Eastern Bees.

L. A. LOWMASTER.

On page 132 is an article from G. M. Doolittle, condemning the Syrian bees, classing them with those from Palestine, and calling them all "Holy Land bees." Syria is not the Holy Land, and never was; and I would like to know how the Syrian bees can be called Holy Land bees when they never came from the Holy Land.

The Syrian bees are the original and only pure race of bees in the world, and all races originated from them; if not, where did the other races of bees come from?

Before I notice a few of Mr. D.'s remarks, I will say that I have handled Syrian (not Holy Land) bees longer and more of them than Mr. D. has, and I know what I am talking about. I also have the dark and light-colored Italians and Cyprians, and I had one of the Palestine (Holy Land) queens, but I did not keep her long, for that race of bees is too cross, and not very good workers. I suppose that was the kind of bees that Mr. D. had instead of the Syrians.

Concerning the prolificness of the Syrians (Holy Lands as he calls them), Mr. D. says: "So I say, that when he (Frank Benton) says that he wants the hive overflowing with bees in the fall, there must be a mistake somewhere." That is just where Mr. D. is mistaken. I want lots of bees in the fall, then there is no danger of any loss in wintering. It is a well known fact that a strong colony of bees will winter far better than a small, good-for-nothing colony, and where is there an intelligent apiarist that will try to winter a small colony of bees?

Mr. D. says: "As soon as the honey harvest arrives the queen (Italians I suppose) ceases her prolificness, and thus we do not have a lot of 'hungry hands' to board when they are of no use to the apiarist." I am surprised to hear such remarks by one who claims to know all about bees. It is a well know fact that a queen will not "cease her prolificness as soon as the honey harvest arrives; but on the contrary, as soon as the bees are getting honey and pollen, she lays more rapidly; and when there is scarcely any honey to be gathered, she will lay more sparingly. From the strongest colony we always get the most honey; and to obtain this, we must have the hive overflowing with bees, and to secure them we must have a prolific queen. Please give the Syrians credit for their prolificness.

Mr. D. claims that the Syrians will keep on laying as long as there is any honey in the hive. Let us see what race of bees lays the latest. Last fall, after the frosts, I put in a drone comb in the centre of one of my Syrian colonies, and fed them to get the queen to lay in the comb, but she would not. I also fed another Syrian colony to stimulate the queen to lay, so I could get a few eggs to rear some queens, but it was all in vain. I had one colony of Cyprians which had not killed their drones at this time, so I went to the hive that my Doolittle queen was in, and I found lots of brood and eggs. I then concluded to rear a few Italian queens and have them fertilized by Syrian drones. This is no opinion or idle talk, but facts.

Some say the Holy Land bees do not ripen their honey. If he means the Syrians, I emphatically deny all such absurd statements. They do ripen their honey well; and if any one denies it, I will send him some honey to prove it.

A strong prejudice exists against the Syrian bees by Italian queen-breeders; but in spite of all the opposition, they are fast moving toward the front. To prove it, I quote from *Gleanings*, page 241, May number of 1883. Mr. Good says: "Again the Holy Land bees have proven themselves to be the most hardy, as the Italians are all dead except a few weak colonies. I had about 80 colonies of Italians last fall. I have a brother who has a Holy Land apiary of 30 colonies only 40 rods from my own. He wintered his bees on the summer stands, and lost but one colony. The rest are nearly all in good condition, and very strong also." And farther on Mr. Good says: "In a letter from Mr. H. Alley, March 30, 1883, he says: "Have not the Holy Land (meaning the Syrian) bees wintered best with you? They have with me. The Italians are the poorest race we have to winter, and I am breeding Cyprians and Holy Land bees largely." At another place he says: "I tell you the new races will sweep the board sooner or later."

Dr. J. P. H. Brown, of Georgia, at the National Convention of 1881, reported that the tongues of the Cyprian bees, in a trial of six, aggregated 1-32 of an inch longer than his improved Italians, and they in turn aggregated 3-32 of an inch (1-10) longer than the imported Italians. Equally pronounced is the result of Prof. Cook's numerous microscopical measurements of the tongues of the Syrian bees, which he finds to equal those of the Cyprians, and .006 of an inch longer than those of the Italians. If the Syrians are capable of as great improvement as has taken place in the Italians up to this time, we may count upon a tongue more than ⅓ of an inch in length, which will be sufficient to reach the nectar in the first bloom of red clover.

Last summer my Syrian bees worked the first bloom of red clover. If there is any one particular race of bees that may be claimed as the perfect one, it is the Syrians; but as no one race possesses all the good qualities of the "ideal bee," it is safe to say that the Syrians come nearer to that point than any other. They have less bad qualities than any other race of bees, and they have more valuable qualities not possessed by any other. As they have powers of locomotion not possessed by any other race of bees I have ever seen, they seem to be able to carry immense loads, and fly wonderfully swift when so loaded.

I most emphatically affirm that in the Syrians we find larger numbers of the necessary qualities for the foundation of the "coming bees" than in any other race or strain in existence.

At the Eastern Iowa and Western Illinois Bee-Keepers' Association, Mr. T. G. Newman, in speaking of the bees of the future, or "ideal bee," said: "The queen must be prolific to be able to keep the hive full of bees in order to gather the honey harvest when it comes. The bees must be industrious to let nothing escape their vigorous search while gathering the sweet nectar. They must be docile to allow the apiarist to manipulate them with ease and pleasure; they must be strong and hardy to withstand the rapid changes in climate; and they must be of singular beauty to attract the admiration of the fancier of fine stock."

In the above we have the whole story of the Syrian bees "in a nutshell." In conclusion I will say that I have been speaking plainly upon this matter, because I have the best interest of apiculture at heart, and consider that when stricter attention is paid to rearing better queens, we shall have made a step in the right direction; and if there is any better bee in existence than the Syrian I would like to know it.

Belle Vernon, O.

For the American Bee Journal.

My Report on Wintering.

W. HARMER.

I have wintered my bees without loss; but I could not help it as they would live, contrary to some of the rules laid down by a few writers on safe wintering. I commenced last season with 6 colonies; sold one, and increased the remaining 5 colonies to 21. I sold 2 colonies in the fall, thus leaving 19 to winter. My receipts for bees and honey, last season, were $97. I obtained from 20 to 25 cents per pound for honey here. I fed them about 50 pounds of granulated sugar syrup.

Allow me to say a word or two concerning their condition before going into winter quarters. 1. They had stopped breeding for weeks before being put away. 2. Some of them had to be fed at "the eleventh hour," when it was impossible for them to seal their honey. 3. After increasing over 300 per cent. in this northern latitude, you may imagine that they were none too populous. 4. (Last rule broken). I did not crowd the bees together with division-boards.

Now for the rules which I tried to follow: 1. On account of the great increase, there was very little pollen left in the hives. I think that was one reason why they stopped breeding so early in the fall. 2. I cut a passage way through the combs. 3. They were kept at a temperature of from 40° to 50° above zero, except the last 2 or 3 days of their confinement, when it went up to 52°. 4. There was thorough ventilation in and out of the trench. 5. They were in a dry place. 6. They were in a quiet place—a trench in dry, sandy ground (under the house) covered with boards, and 2 or 3 inches of sand upon the boards.

I had a hole cut through a board at the end of the trench, so that I could see the thermometer. I had no other way of regulating the temperature but by ventilation. The hives could not be seen, and there was not a hand placed upon them for 164 days—the exact time of their confinement under ground, besides 10 days or 2 weeks in which they could not possibly fly, before they were put away for the winter; making in all 174 days of confinement.

I took them out on April 25, and found every colony alive. Not one bee (let alone a colony) was affected with diarrhœa. They were gathering pollen the next day, and about half of the queens had commenced laying; but there was not a piece 6 inches square of sealed brood and larvæ in all the hives put together.

Some of the bottom-boards were so dry, and so few dead bees upon them, that you would think they had only been shut up for a day or two in the busy time. The entrances were left wide open, and they went outside to die. I found very few moldy combs, although there were a great many unoccupied.

My experience in 1883 led me to winter in this way; for I had one colony buried for 165 days, and it came out clean, dry, and good-natured on May 1; while 10 colonies which I had packed outside on the summer stands, all died but one. Although the 10 had the advantages of outside cases packed with planer shavings; and also the chance of a cleansing flight. But they ran the chance of being smothered or frozen. Some starved (with honey by their side) while breeding on a fine day. They were attacked by diarrhœa, and then wanted a cleansing flight when it was too cold. So you can easily see how I lost them.

I think I have learned one important fact, and that is, that bees will live eight months when kept in a proper temperature and not allowed to breed out of season; or, perhaps I should say, in confinement. I believe some of mine are that old now, and I have no young bees hatched out yet. Every colony has a good laying queen, and promises to come through the spring all right.

My experience in wintering bees the last 3 or 4 years has led me to believe that Mr. Heddon's "pollen theory" will come out ahead. Breeding in confinement, I believe, to be the cause of diarrhœa. I think it is generally understood that bees have to digest a great deal more pollen when breeding than when they are compelled to take only enough to sustain their own bodies.

My 19 colonies weighed 136 pounds less on May 25 than they did when put in for the winter. I found the difference in weight of each colony to vary from 3 to 10 pounds in 164 days. For spring dwindling, I am keeping the cold winds shut out of the hives, and the bees shut in, unless the thermometer shows that it is warm in the shade. I am buying 10 colonies more, and I think my time will be fully occupied between them and a garden of small fruits.

Manistee, Mich., May 3, 1884.

For the American Bee Journal.

Extermination of Foul Brood.

A. M. GANDER.

In consideration of the existence and spread of foul brood in Lenawee county, I would request every bee-keeper to examine his bees, or have them examined by an experienced bee-keeper, to make sure that the disease does not exist; or if it does, to take prompt action against its spreading over the country. All hives which contained diseased colonies should not be left where other bees can have access to them (by carrying away what honey there is left in them, and the germs of the disease with it), but they should be boiled thoroughly, or burning them would be better.

Bee-keepers cannot be too careful about the spreading of this disease. It may exist among their bees, and they not know it until their apiaries are nearly ruined. Every bee-keeper who cares to keep his bees, should give them a thorough examination and know certainly whether they are diseased or not. Some bee-keepers are too careless to pay the least attention to their bees, and do not know that there is anything the matter with them until their bees are dead.

There are but few of this class of bee-keepers who know what caused the death of their bees; and what is worse than all, they allow the hives to remain for other bees to carry away the foul-broody honey, and spread the disease in every direction. Such men as these will have to be looked after by others who are more interested; and where they will not give the matter the necessary attention, after being properly informed, they will have to be dealt with according to the law of the State. But how much better it would be if all would look to their own interests and eradicate the disease wherever it exists.

We have a foul brood commissioner in this county (Mr. D. G. Ediniston of Adrian), whose duty it is to examine bees whenever called upon by a written request according to law. It is the wish of every careful apiarist that this matter be attended to at once. Better have them attended to now than to lose your bees by this disease, which is sure to happen if left to pursue its own course. There is plenty of the disease throughout this county; and the above caution will apply to any county.

Adrian, Mich.

For the American Bee Journal.

Facts About Bees.

J. M. HICKS.

When a colony discovers that its queen is becoming or approaching barreness. the bees will at once commence preparing queen-cells and rear another queen to take her place.

It usually requires about 30 days to rear a young queen from the egg, and have her brood sealed over for hatching; after which it requires 13 days for the young bees to emerge from the cells after they are sealed over, and 21 days from the time the egg is deposited, until it comes forth a mature bee.

A thousand young queens can be reared in one season from the eggs produced by a single queen, if properly managed for the purpose. It is a well-known fact that any and all eggs which produce worker-bees, are females, and are susceptible of being converted into a queen if rightly managed at the proper time.

All eggs laid by a virgin queen will produce drones only—they not being a perfect male; but drones which are reared from a fertile queen can be relied upon as being perfect male bees.

Battle Ground, Ind.

For the American Bee Journal.

Parodies, Fixed-Frames, etc.

A. WEBSTER.

The Weekly Bee Journal for the year 1884 is so satisfactory that I wish to offer my congratulations for its excellent and interesting contents. I was especially interested in the article on page 9, entitled "Essentials of the Coming Steam Engine," and congratulate its author on the happy manner in which it was written. I also wish to thank him heartily for the high compliment he has paid to the literary excellence of my feeble effort to set forth the "Essentials of the Coming Bee-Hive," by making it a model for his discourse on his pet hobby. Such appreciation from such a source is exhiliaratingly grateful to an humble bee-keeper who is more accustomed to constructing bee-hives than rhetorical sentences for publication, and goes far to efface from his mind the memory of the haunting thought of the waste basket, while the article awaited publication. "He builded better than he knew," is seldom said of any man's work in his life time; and the prompt and unequivocal approval of my literary work, that your esteemed correspondent has shown by parodying it, is dearer to my heart than hopes of posthumous fame.

I cannot forego the opportunity to add a few notes of experience with the new hives. I have had an unlooked-for demonstration of the advantages of fixed comb-frames. The high winds that prevailed so much last fall, lifted six standard Langstroth hives from their stands, in one of our apiaries, and laid them not very carefully on their sides; some of the caps being blown to the distance of several rods. The poor bees were found in a sad plight; the combs being piled closely together; many bees were killed, and more wounded; and some of the queens lost. At the same time, in our home apiary, a large branch was torn from an apple tree, falling on two of the new hives. In removing it, one of the hives was accidentally over-turned and rolled over, coming to rest bottom upwards.. The result was that not a frame was displaced or comb cracked, and the bees were but slightly disturbed.

The safety of these fixed, standing, movable-comb frames in case of accident, and in transporting hives, is only an incidental advantage—the purpose for which they were invented is far different and incomparably more important.

South Northfield, Vt.

For the American Bee Journal.

Let us deal with Facts.

A. W. OSBURN.

On page 328 is an article from the pen of D. K. Boutelle, on "The Production of Drones," which contains much food for thought. Mr. Boutelle's experience is precisely like my own.

Without wishing to contradict the statements of many of our old teachers; *i. e.*, that the queen controls the sex of the bee while laying the eggs; yet it is a fact that the nurse-bees can and do produce workers, drones and queens from the same eggs. That is, take a sheet of eggs from a prosperous colony and give it to a queenless colony to rear cells, and at the end of 10 or 12 days what do you find? In many cases you find queen-cells, worker brood capped over in the regular order, drone cells lengthened out, and perfect drones in them; only they are smaller because having been reared in worker cells.

The bees do not often do this, but they cut off the cells to the septum and build full sized drone-cells; place eggs or larvæ in them, and mature as finely-developed drones as were ever reared under other conditions. Now these are facts; and in the face of such facts, what are we to do with the old theories.

I leave the subject for abler pens than mine—for the earnest consideration of those who have a fancy for delving into the unforeseen and deep mysteries of this wonderful insect—the bee.

San Miguel, Cuba, W. I.

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

☞ Letters for publication must be written on a separate piece of paper from items of business.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

SELECTIONS FROM OUR LETTER BOX

Considerateness of Bees.

We have had a cold, wet spring, but everything looks very well now. White clover is in full bloom, and the bees are utilizing it. I have had no swarms as yet, but some of my neighbors have had several. The more I study about bees and notice their habits, the more interesting they become to me. I caught two crippled ones on the ground and put them both upon a piece of wood, when one fed the other. One of them was an Italian and the other a hybrid. I was not aware that bees are so considerate of each other. J. C. TANNER.

Huntington, W. Va., June 2, 1884.

Spreading the Brood Frames.

In the description of Mr. Doolittle's hive, on page 69, about the middle of the first column, he says: "The bees are stimulated by spreading the brood, and by other ways familiar to the apiarist, till the 9 frames are filled with brood." I would ask: 1. How does he get at the brood-chamber with the cotton cloth and packing in the shape as described in his article? In the second column he says that he put in "one tier of sections." I infer that they are put in sidewise to the division-board. 2. How many slots are in the division-board, to each section, and what size are they? 3. What sized sections does he use in those 5-inch spaces? E. C. FARQUHAR.

Carlos City, Ind.

[Mr. Doolittle's answer to these questions will be found in his article on page 373.—ED.]

Jack Frost's Work.

From the Atlantic to the Pacific, reports have come of a cold, backward spring; and here, midway between these oceans, it is as discouraging. For three nights in succession we have had frost. Yesterday morning at 5 a. m. the thermometer indicated 6° below freezing. Corn, potatoes, hop-vines, etc., are very much injured. JOHN MORRIS.

Mauston, Wis., May 30, 1884.

Snow on "Decoration Day."

On the morning of "Decoration Day," the hills between lakes Keuka and Canandaigwa, in western New York, were white with snow; and on the level of the lakes ice formed ¼ of an inch in thickness. The hills, with their newly-leaved trees covered with snow, were in strange contrast with the fruit trees in the valleys one week before, when they, too, were robed in whiteness; but they then were a more pleasing sight to the bee-keeper. Bees did well during fruit bloom, but our "freeze" was another of many hard backsets which bees have had here this spring; and now we shall have to nurse them for a while, or until raspberry and clover bloom. A. F. ROBSON.

Italy Hollow, N. Y., June 2, 1884.

Indications for Honey Harvest.

So far as I can ascertain, bees have wintered fairly well in this part of the State. My bees came through the winter without loss, on the summer stands. They gathered their first pollen on April 4, built up rapidly and stored considerable surplus honey from fruit bloom. I have delayed their swarming by removing queen-cells and forming nuclei. They are now in fine condition for the white clover, which is just beginning to bloom. Everything indicates a large honey harvest. E. L. DRESSER.

Huron, Ohio, June 3, 1884.

Bees have received a Backset.

Bees in this vicinity have just received a backset, from which they will not recover soon. They were in fine condition, and were preparing for a general swarming. On May 26 a large swarm issued, and is now living at my expense, as a cold wave has been passing this way ever since. On the mornings of May 28 and 29 heavy frosts covered everything, and in some places ice formed ½ inch thick. Drones are being slaughtered, and swarming is postponed for awhile at least. IRA BARBER.

De Kalb Junction, N. Y., May 31, 1884.

Stimulating Bees in the Spring.

On page 69 of the BEE JOURNAL, Mr. G. M. Doolittle gives an explanation of his manipulations of hives in producing comb, which I consider the most rational handling of bees for the purpose I have yet heard. But when I study it for the purpose of imitation, I find considerable unexplained that I consider of importance. I would ask how he starts out with 9 brood frames when he puts his bees into winter quarters with but 6? True, in the spring, he says that he stimulates his bees "by spreading the brood, and by other ways familiar to the apiarist, till the 9 frames are filled with brood;" yet I find that his bees, in the winter, are covered with "a strip of common cloth spread over the frames, and down each side over the slotted division-boards. The 5-inch spaces are now filled with chaff, and a chaff or sawdust cushion placed over the frames." I now infer that the 6 frames occupy a space of 12x12x13½ inches. Am I correct? or are there 9 frames now in that space? If but 6 frames are now in the hive, how does he get the other 3 into the brood-nest without removing the cloth or chaff until he is ready to remove 3 combs from the brood-nest, and put them behind the slotted division-board? Another thought: What width of sections does he use that it requires 5 inches of space to accommodate them? Also, how large are the sections he uses? Again I would ask: How is his division-board slotted, and the slots arranged "so as to form openings at the right place for the bees to work to the best advantage, etc." Is the division-board fixed or movable? I consider just such matters of detail as of the most vital importance; and the want of such knowledge may upset the whole principle involved. ABEL GRESH.

Weedville, Pa.

[A reply to the above queries will be found in Mr. Doolittle's article on page 373 of this number.—ED.]

Moving Bees on Horseback.

Last winter, wishing to remove 60 colonies of bees from my old apiary to a new one, and there being no wagon-road between them, I concluded to move them on horseback. The distance was over 12 miles. I took four pieces of board 2 feet long and 1 foot wide, nailed to them cleats 2 inches wide and 1 foot long across each end, and bored 1-inch holes through each cleat, and board at the end. I then put the edges of 2 boards together, and put strong rope through the holes, which made a kind of shelf. The lower one being level, I placed 2 of these on each horse, and a colony on each side of a horse, and one on top. They were in box-hives with the top-bars in each. I had good success in removing them, for only one comb broke down. The most of the bee-keepers in the East have boats, railroads, or a good spring wagon on which to transport their bees; but bee-keepers in California can move them on horseback.

Monterey, Cal. JOHN L. SECOR.

Bees Booming—Frost.

My bees are preparing to swarm. We had a severe frost on May 29 (22° above zero). The leaves of some forest trees were killed, and the fruit which was so promising is destroyed. G. H. ADAMS.

North Nassau, N. Y., May 30, 1884.

Sweet Clover Honey.

I wintered 54 colonies on the summer stands without loss. Thirty-five of which were packed, and were much the strongest in bees and honey. For the first time for years we had fine weather during fruit bloom, and a fair amount of honey was stored. Bees have bred up stronger than usual. White clover has been a failure for the past two years; but we have a fair substitute in sweet clover, which is springing up along our river banks. This village is located near the confluence of the Susquehanna and Chening rivers, whose gravelly banks are white with blossoms, and each succeeding season increases the crop. An old forsaken cemetery near by has been seeded, and will soon yield something more fragrant than its usual crop of burdock. The largest part of my honey crop is now from sweet clover, which, if not so white as that gathered from white clover, is very rich and pleasant in taste. D. F. PARK.

Athens, Pa., June 4, 1884.

An Editor's Experience with Bees.

I am amusing myself with 7 colonies of pure Italian bees, and find it a more interesting pastime than writing double-leaded political editorials. I am not an expert, but know how to get stung as well as any one. My father was a bee-keeper, and that gives me an advantage; but the bees do not seem to take this fact into account—do not respect my pedigree. "Honey dew" on maple trees has been abundant for a week—the product of turtle-shaped insects which adhere to the bark of the tree as thickly as three in a bed. White clover is coming on apace, and the prospect for an abundant yield of "sting-bug juice" never was better.

D. B. GIVLER.

Naperville, Ill., June 4, 1884.

Bee-Notes from Utah.

The Utah Convention, reported on page 324, was held in Salt Lake City instead of Tooele City. During April the weather was very bad for bees, and there were quite a number of losses during the month; but early in May I found my bees showing signs of swarming, in several of the colonies, and I lost one colony during April, which makes 2 in all. Most of my bees are working in upper stories, but I have not yet extracted any honey, although the apple, peach, plum and other fruit trees are in full bloom, and along the bed of the creek of Settlement Canyon, the willow is the great attraction to the bees. They have about finished with the cottonwood bloom. We have splendid pasturage for bees, so the prospects are very promising where bees are in a condition to take advantage of the harvest that awaits them.

JOHN DUNN.

Tooele City, Utah, May 24, 1884.

How to Separate Swarms.

In the Weekly BEE JOURNAL of 1881, on page 171, Messrs. Bray & Seacord gave a description of a swarm-separator as follows: "Make a box 3 feet long, wide and deep enough to hang the frames in, from the hive you use; place the frames in the box, the same spaces apart as they are in the movable comb hive; make one entrance for the bees on the side of the box, twice the length and of the same height as the entrance to the hive; make 3 or 4 division-boards to fit the box, then make a cover with cleats on both sides (no end cleats) to fit the box." Now, when two or more swarms unite, put them into swarm-separator in a cool place in the evening; and the next morning you will find them separated. Push the cover back even with the division-board, close the entrance and take the bees to hives. Having tried this plan, I wish to say that it works with entire satisfaction; and all bee-keepers who depend upon natural swarming should have a swarm-separator of the above description. I find the BEE JOURNAL good for a reference in times of need.

Monterey, Cal. JOHN L. SECOR.

Local Convention Directory.

1884. *Time and place of Meeting.*

June 19.—Northern Mich. at Ionia.
F. A. Palmer, Sec.

June 20.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Sundry Questions.

1. Do you think it possible to cut off drones' heads when examining a colony?

2. I have my bees (8 colonies) on an iron shed-roof. Is that as suitable a place as on the ground—ground room is very scarce with me?

3. I, last season, put an extra hive under the brood-chamber of one colony; they did not swarm; the queen did not go into the lower hive. I extracted 80 pounds from the bottom hive, and got 150 pounds from supers over the brood-chamber in 1½-pound sections. Can I reasonably expect like results, if I manage the same way with all my bees this season?

4. I desire very much to avoid increase by swarming; for they are almost sure to cluster on tall oaks out of my reach when they swarm naturally. How can it be done? I am having an unusual quantity of drones this season, and have no use for any that I know of.

5. Is it profitable to use old combs from ⅓ to ½ filled with pollen? I have used several, and they appear to remain as when I put them in. It seems hardly profitable.

G. J. PEASE.

Ann Arbor, Mich., June 2, 1884.

ANSWERS.—1. Yes; and probably I shall do some of it right away. Of course I mean before they are hatched out of the cell.

2. I would prefer the ground, but you can succeed where you are, if you have the tact.

3. I do not think you gained any thing in upper surplus-storing, by placing an extra hive below.

4. It can be done in several ways, too lengthy in detail to describe in this department; but I should think cutting down the oaks, or moving the apiary to a suitable place, much more practical.

5. Yes; for the bees will clear out the old pollen, when the queen needs the room to breed in.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 9, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. CHAS. F. MUTH.

NEW YORK.

HONEY—Present quotations are as follows: Fancy white in 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c: dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market.

BEESWAX—Scarce, and sells readily at 36@38c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—Choice white comb honey in 1 lb. sections brings 18c; in 1¼ to 2 lb. sections, quotable at 16c. Comb honey discolored and in undesirable shape is selling at 10@12c. Extracted honey is in light demand at 6@8c. Manufacturers of syrups and bakers say that the low price of sugar is the reason why they do not use as much honey as formerly. There is very little desirable comb honey on the market.

BEESWAX—Is scarce and fancy yellow brings 38c. Good beeswax, but dark, and having more or less of refuse matter in it, quotable at 30@33c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—A little new extracted is on the market, but is not receiving much attention, buyers being rather timid. Several small lots of old extracted arrived within the week, mainly off quality, and the same are offering at low figures. Some very choice old extracted was sold at 7c., which is at present an extreme figure. The demand is very light, and the tone of the market weak. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 6@7c; dark and candied, 4@5c.

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—There is now a little slackening in the movement of honey in anticipation of the new crop. Prices unchanged, 15@16c being the range for choice comb, and a few choice ½-lb. sections bringing 19c. I will be glad to receive shipments of new honey as soon as practicable, after it is thoroughly ripened. Remember the "early bird," etc. Extracted nominal at 7@8½c. I will be pleased to send a copy of "Suggestions on Packing and Shipping Honey," free to any one on application.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8½c.

GEO. W. MEADE & CO., 213 Market St.

☞ Cook's Manual in cloth and the Weekly BEE JOURNAL for one year will be sent for $3. Manual and Monthly, $2.00. We have no more of the old edition left, and, therefore, the club price of that edition at $2.75 and $1.75 is withdrawn.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports — a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

◆

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Several hundreds of subscriptions run out this month. Last week we notified them by the *blue* pencil mark, and now we desire to impress them with the importance of *renewing at once*, to save themselves annoyance by the loss several numbers, and also save us the trouble of removing the names from our type mail-list, and then setting them up again a few days afterwards. Those who desire to have the BEE JOURNAL continued until they *order* it discontinued, should notify us of the fact, and we will mark it on the mail-list. Then no numbers would be lost or trouble made for any one.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

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1884. JOSEPH D. ENAS, 1884.

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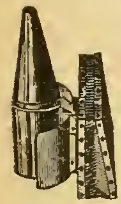

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W. C. LESTER, Washington Hollow, N. Y.
21A4t

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Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

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1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

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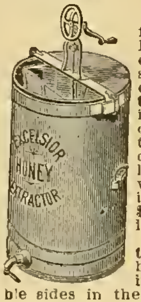
We want a local reporter in every farming community to furnish us from time to time such facts as we may require. Full particulars regarding services, compensation, etc., will be furnished on application. Address Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A18t

EXCELSIOR
HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

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For 2 American frames,	13x13	inches	$8 00
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For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
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For 4 " "	13x20	"	16 00

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Lungs & Lung Diseases,
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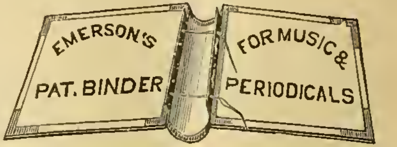


The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder

For Monthly Bee Journal	**50c.**
For Weekly Bee Journal	**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

IF YOU WANT
—A—
VEHICLE,

SEND A POSTAL CARD TO THE

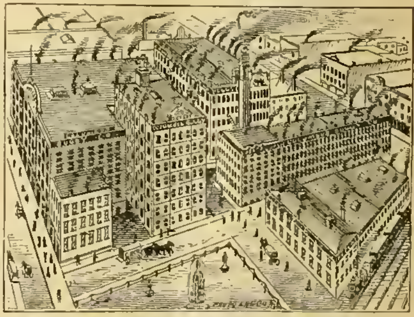
COLUMBUS BUGGY CO.

COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
ABtf **J. VANDERVORT, Laceyville, Pa.**

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.
Price, 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

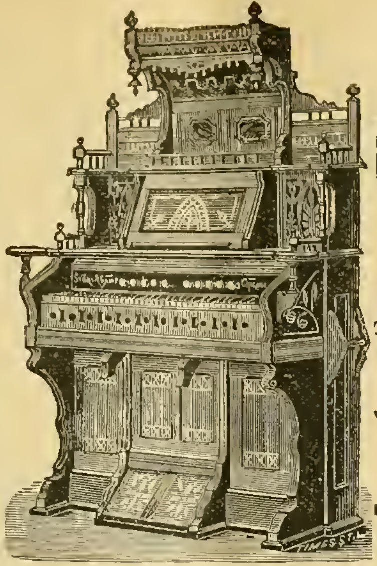
It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL.

Bees, Hives, Extractors, Smokers, Dadant Foundation, and other Supplies. ARTHUR TODD, Germantown, Philadelphia, Pa. 19A5t

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY,** Wenham, Mass.



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
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Simpson & Co.,
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Story & Camp.

The largest exclusively Piano and Organ house on the Continent.

Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.
Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street, CHICAGO.
203 N. Fifth Street, ST. LOUIS.

Bingham Corner.

DRESDEN, TEX., May 28, 1884.

Conquer the Cyps.—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

ITALIAN BEES AND QUEENS.

Send for Price List to

D. B. BROWN, DES MOINES, IOWA.
10D7t

Rise in Prices of Foundation

The prices of Comb Foundation are NOW **advanced two cents per pound** from the quotations in our retail Price List, and **three cents, per pound, at wholesale.**

CHAS. DADANT & SON,
23ABtf Hamilton, Hancock Co, Ills.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS, before ordering your

APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

TESTED QUEENS, $2; untested, $1; 4-frame Nuclei, $3.50 and $4.50. Mississippi Wax Extractor, $3. OSCAR F. BLEDSOE, Grenada, Miss.
21C12t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 5 cents per pound** above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

BEESWAX.

I pay **34c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

NEW AND USEFUL

Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1868. 1884.

HEDDON'S COLUMN.

BEST GIVEN COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published !

New and Enlarged Edition OF BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.

H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect." GEO. B. PETERS, M. D.

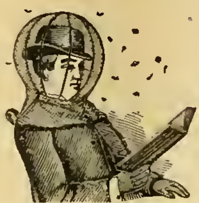
We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,
Lock box 995, Belleville, St. Clair Co., Ills.
18A13t 6B3t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

ALFRED H. NEWMAN,
923 West Madison Street,
CHICAGO, - ILLINOIS.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

STANLEY'S

Automatic Honey Extractor AND SMOKER.

Send for descriptive Circular and Prices to

G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

65 *ENGRAVINGS.*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid ....in May and June, each....$	.50
Italian—untested—not warranted, in May and June, each	1.00
Italian—warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK C ., Portland, Me. 4A1y

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

OLDEST BEE PAPER IN AMERICA

ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., June 18, 1884.

VOL. XX.—No. 25.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, $2 a year; Monthly, $1.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free.*

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

FOREIGN POSTAGE, EXTRA:

To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, Loodon, England, are our authorized agents for Europe.

Entered at the Chicago P. O. as Second Class Matter.

ADVERTISING RATES.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 7 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

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☞ The Southwestern Iowa Bee-Keepers' Association, will meet in Corning, June 28, 1884.

W. J. OLIVER, *Sec.*

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

☞ Letters for publication must be written on a separate piece of paper from items of business.

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Clu*
The Weekly Bee Journal,................	$2 00..	
and Cook's Manual, last edition (in cloth)	3 25..	3 00
Cook's Manual, (in paper covers)....	3 00..	2 50
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)......	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work.........	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 00
Alley's Queen Rearing........	3 00..	2 75
Scribner's Lumber and Log Book....	2 35..	2 25
Fisher's Grain Tables.................	2 40..	2 25
Moore's Universal Assistant.........	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees..........................	2 75..	2 50
King's Text Book......................	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
New Eng. Apiarian, (W.W.Merrill)..	2 75..	2 50
British Bee Journal..................	3 75..	3 50
The 8 above-named papers.......	9 00..	7 75

The Monthly Bee Journal and any of the above, $1 less than the figures in the last column.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Advertisements.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

A. H. NEWMAN, Chicago, Ill.,
C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH. Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

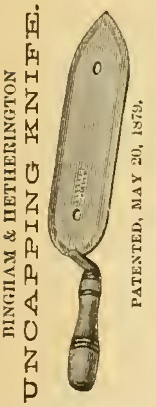
We guarantee every inch of our Foundation equal to sample in every respect.

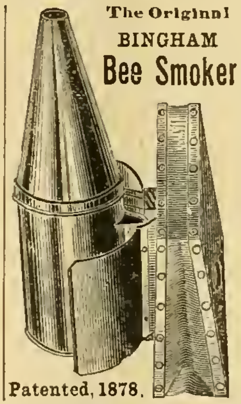
CHAS. DADANT & SON,
5AB1y HAMILTON, Hancock Co., ILL.

F. D. N. MILLS. 10 INCH $15.00
W. C. PELHAM.
MAYSVILLE, KY.

37A1y

VALUABLE ORIGINAL PATENTS.


BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

BOOKS!

Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding—Swarming—Dividing—Extracting—Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, in cloth, **$1.00;** in paper covers, **75 cents.**

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JUNE 18, 1884. No. 25.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Handling and Quieting Bees.

A Lanarkshire bee-keeper, in the London *Journal of Horticulture*, gives the following on handling and quieting bees, the remedies, when they are irritated, and the best treatment of stings :

When bees are accustomed to people and domesticated animals near the apiary, they seldom offer an attack unless through some provocation, which they are sure to resent. Incautious manipulation, turning the soil, and pulling weeds or vegetables ; certain odors, such as musk and other scents ; vinegar and smoke, and allowing bees to have access to honeycomb or robbing other hives, are a few of the many things that irritate them, all of which should be guarded against. One bee irritated and using its sting may set the whole apiary in a frantic and vicious state, which may last for weeks ere they be calmed down. It is possible that bees possess a sense that we are ignorant of. One thing is certain, when people of a nervous temperament manipulate bees there is something that excites them. We can avoid irritating bees in many ways, such as by leaving the apiary for a time when they are inclined to sting, or disturbing them as mentioned above ; but there are times when all danger has to be faced, and caution with firmness is necessary, and veils, if stings are dreaded. When manipulating, I seldom use either a veil or smoke, carbolic acid being so much superior to the latter that it enables me to manipulate with safety, leaving the bees in a passive state after it. The hive also is the better able to resist foul brood, while moths do not harbor where it has been used, neither is the honey tainted nor the larvæ affected by its use, as is the case when smoke is used. Carbolic acid is useful to prevent robbers attacking another colony. The robbing hive is well smeared at the entrance ; this diverts the bees from making further inroads on its weaker neighbors. When commencing to manipulate, if the bees are vicious or suspected to be so, I smear the alighting-board with some acid, then uncover the hive. I then smear the tops of the frames with the acid, and having a wing or feather also saturated so that I may dislodge the bees from any part by its use, placing it near the bees, causing them to retreat to or from any part I may choose. When this is done, the bees remain quiet, and do not crowd over the frames nor attempt to sting as they do when smoke is used.

There are many applications and nostrums recommended for stings, none of them being effectual as a cure, for the very simple reason that the poison has impregnated the system before the alkali can be applied and reach the acid to neutralize it. The best remedy I ever found was to apply heat by steam or water to the patient to cause a free perspiration, and to give a little sal volatile ; but this latter ought to be prescribed by the medical man. Not a moment should be lost to bring on a free perspiration, and every means resorted to that will accomplish that end.

☞ By the Lakeview, Mich., *Enterprise*, we notice that Mr. S. J. Youngman expects to receive 125 colonies of bees by rail from Louisiana to keep on shares until next September. The increase is to be limited to one swarm from each colony ; Mr. Y. has all the increase and one-half of the honey for his share. The bees will be 5 days or more on the road.

☞ We have received the Catalogue of High-Class Poultry and Fancy Dogs of Geo. H. Pugsley, Brantford, Ontario, Canada. It contains 68 nicely illustrated pages.

How to Grow fine Celery.—A new method, by Mrs. H. M. Crider, York, Pa. A 25-cent pamphlet, showing how to grow fine celery, according to a theory deduced from a study of the natural habits of the plant, and well attested by several years of experience. The importance of celery as an article of diet, and especially its value as a specific for nervous diseases, makes its successful culture of the first importance ; and the method herein given will enable any one to have it in perfection in his garden.

Statistical Report.

Pres. McCagg, of the Eastern Iowa and Western Illinois Bee-Keepers' Association, gives the following as all the reports received up to May 25, 1884. Some 15 or 20 members had not reported at that time :

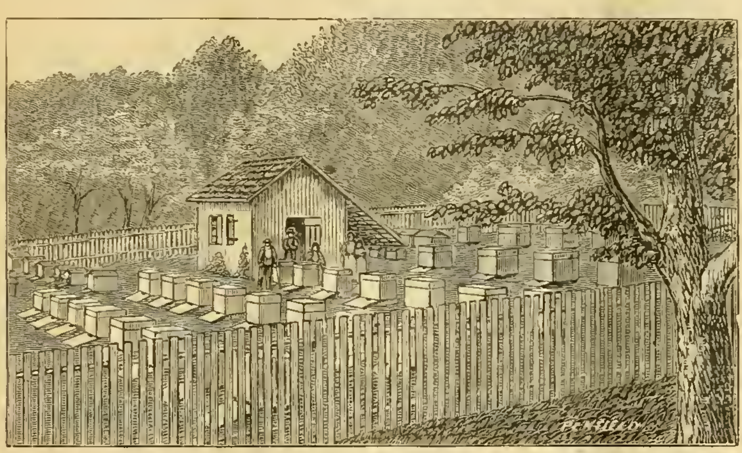
NAMES.	No. of Colonies in Fall, 1883.	No. Wintered on Summer Stands.	No. in Cellar or Bee-House.	Lost.	Weak.	Good. May 10, 1884.
J. B. Lindle	207	....	207	18	9	179
J. C. Yocum	23	23	....	20	2	1
Wm. Riggs	13	....	13	5	6	2
J. I. Swim	48	31	19	20	12	16
I Hall	6	6	....	3	....	3
J. E. Sutherland	11	....	11	1	2	8
D. Moore	8	8	....	3	2	3
T. W. Livingston	134	134	....	34	10	90
C. H. Dibbern & Son	200	50	150	37	20	143
J. V. Caldwell	87	5	82	17	....	70
J. L. Newberry	23	17	6	2	9	14
E. R. Wright	234	234	....	62	22	150
E. Mead	13	13	....	5	...	8
R. Murphy	123	....	....	5	18	100
Wm. Hurston	30	30	....	10	....	20
W. C. Freeman	6	6	....	....	....	6
H. W. Gilbert	4	4	....	....	1	3
Wm. Goose	28	28	....	....	4	24
O. H. Carpenter	11	...	....	11	....	....
Paul Stahmaer	39	39	....	6	4	29
Philip Barth	2	2	....	2	....	....
J. B. Dopp	16	5	11	4	....	12
Phillip Earhart	41	....	41	4	3	24
Joshua Wadsworth	38	29	9	7	2	29
Wm. Gromell	20	20	....	3	3	14
G. W. Ashton	3	3	...	....	....	3
John Madden	11	11	....	....	1	10
G. L. Gast	150	80	70	25	50	75
Miss Kate E. Case	5	....	5	....	1	4
J. D. Adams	35	1	34	13	10	12
T. J. Davis	75	....	75	3	10	65
H. O. Stacy	56	56	...	42	2	12
James Johnston	54	54	....	42	2	10
Ira Brashears	1	1	....	1	. ..	....
C. G. Plummer	5	5	....	4	...	1
J. C. Hinberg	7	7	....	7	....	. ..
A. Webb	20	20	....	19	....	1
C. Fringall	19	19	....	8	2	8
I. V. McCagg	34	14	20	5	1	28
J. J. Nagle	152	152	....	22	30	100
C. Greiner	18	18	....	12	2	4
H. G. Sears	230	....	230	5	5	220
B. F. Little	107	3	104	21	10	76
Adam Littig	4	4	...	1	....	3
Phillip Osborn	150	90	69	15	35	100
L. H. Scudder	165	....	165	35	....	130
Totals,	2666	1222	1312	559	290	1875

The increase in the number of colonies is not over 5 per cent. in the past 2 years, and the increase in the consumption of honey has been at least 20 per cent. in the past 2 years ; so you can see that honey must bring a good price. Weak colonies cannot be relied upon as honey-gatherers. This year's crop of honey, if large, should bring not less than 15 to 20 cents. Do not be deceived by large ideas and big yields at your neighbor's ; we will not be able to supply the demand

Cure for Foul Brood.

T. W. Cowan, Esq., of London, England, lately visited the apiary of Mons. Ed. Bertrand, located at Allevays, in the Alps, Switzerland. Mons. Bertrand claims to have successfully cured "foul brood" there, and Mr. T. W. Cowan details the way in which it was done, in the following article from the *British Bee Journal:*

Allevays is situated at a height of 2112 feet, and is distant about six miles from Nyon, on the road to St. Cergues, on the Jura mountains. The scenery was very picturesque, and as we rose higher and higher, first one peak and then another of the Mont Blanc range came in view. On our arrival at Allevays, we were met by two English gentlemen who had been attracted thither by seeing the view of the apiary which appeared some time since in the *British Bee Journal.* This apiary, as will be seen by referring to the accompanying picture, is situated on the borders of the forest, and is enclosed in the American style. The hives are detached, each being on its own stand, the floor-boards close to the ground, similar to the hives used by me. They are well sheltered from the winds by the forest which extends on three sides. The hives are about 6 feet apart, in rows, the distance between each row being about 10 feet. In front of the hives, here and there, are planted shrubs which serve as guides to the bees to mark their homes. In the centre of the apiary is seen a shed, which is used for manipulation, and as a store and extracting room. It contains hives, frames, a cupboard for combs, and even in the ridge there is a bed which has been useful to its owner when he has been kept late at work with his bees.



Mons. Bertrand's Apiary, in the Swiss Alps.

From the windows there is a splendid panorama of Lake Leman and the Alps. These windows are of peculiar construction, being made to reverse on pivots at the top and bottom, so that by merely turning them any bees that had gotten inside the shed and flown on the glass, could be turned out without any difficulty. A wide path divides the apiary, Layens hives being on the left, and Dadant hives on the right, so that by working the two systems together a comparison might be made; there being about 50 hives in the enclosure. In front of the apiary are small fir-trees destined to attract the swarms, and borders containing experimental plantations of honey-yielding plants, such as scrophularia, yellow and white melilot, borage, phacelia, alsike clover, and others.

This is a good neighborhood for the bees, for in the spring they find pollen on the willows, maples, nuts, and colt's-foot, and honey on the maples and wild cherry trees; later, on the cultivated esparcet, wild sage, and the flowers of the pastures. After the grass is mown, there are the lime-trees, raspberries, wild thyme, golden-rod, astrantia, and others. This apiary is one of the few which yield a regular and constant return; it shows that its owner is a thoroughly practical as well as scientific apiarist.

M. Bertrand is editor of the *Bulletin d' Apiculture pour la Suisse Romande,* which is, without exception, the best and most progressive journal in the French language, devoted to modern bee-keeping in movable-comb hives. Being such a master and authority, it was natural to expect that his apiary would be worth visiting; nor was I disappointed, for here was really a model apiary in every sense of the word; perfect order reigned everywhere, there was a place for everything, and everything was in its place.

We proceeded to examine some of the colonies, and found them well stocked with bees and remarkably strong.

M. Bertrand has a valuable and able assistant in the person of M. C. Auberson, who is a schoolmaster at St. Cergues, three-quarters of an hour's walk above Allevays, who, in addition to looking after his own bees, undertook to assist M. Bertrand at a time when they were stricken by foul brood, and when constant supervision was necessary to stamp out the disease, M. Bertrand's residence being at too great a distance from Allevays to give the bees necessary attention. As the subject of foul brood was one of particular interest to me, having some years ago had to battle with this disease myself, and knowing that it was only by perseverance and great care that I cured my bees of it, I was anxious to know how Mr. Bertrand had proceeded. When I cured my bees, fumigation with salicylic acid according to "Hilbert's" method was not known, and it was much more trouble than now. Experiments made on foul-broody colonies during the last two years, however, convinced me that fumigation, if properly done, was the simpler process. I was not satisfied with my way of fumigating, therefore I was curious to see how M. Bertrand proceeded. His method is so simple, that for the benefit of those whose bees have foul brood, I will give a description of it, and in doing so will give the French weights so that no mistake should be made. M. Bertrand told me that since the establishment of the apiary, he had had foul brood in some of his hives, these at first he burned, but being induced to try to cure them, he persevered and never allowed the disease to get to the worst stage, when a cure would be more difficult. The hives were constantly examined, and if the slightest trace of dead brood was detected, they were at once operated upon. Most of the colonies in the apiary were now perfectly healthy; there was one, however, that had only recently been cured—it is the one standing just behind the gentleman in the wide-awake hat in the engraving, and M. Bertrand and M. Auberson proceeded to operate upon this one in my presence. For fumigating, he has had constructed a lamp, which is cylindrical in form, 6½ inches in diameter, and with an elbow at the top, ending in an opening 5 inches by 1¼ inches. The total height of lamp with elbow being 11 inches. Inside the cylinder is placed a spirit-lamp, and above this is a small tin dish about 3½ inches above the wick of the lamp. The hive is not removed from its stand, but is raised up at the back off its floor-board by means of blocks of wood, and wedges are inserted at the sides, so that all the space is closed except enough to admit the nozzle of the fumigator. One gramme of salicylic acid is placed in the dish, and the flame regulated so that the acid is gently evaporated.

Too much flame would cause it to boil over and waste, not enough would not even melt it, so the right amount can be found out by experiment. The nozzle of the fumigator in operation is now inserted in the opening at the bottom, and the corners of the quilt turned up so as to allow the vapor of the acid to circulate freely. A few minutes after the acid had all evaporated, the hive was examined and the bees did not seem to be in the least inconvenienced by the fumigation. M. Bertrand said that neither brood nor worker bees were hurt, but he was not sure whether or not the queens suffered sometimes as he had lost some. Hilbert says that each hive should be fumigated every six days, four fumigations being sufficient; but M. Bertrand has continued longer, so as to be certain of a cure.

The operations should be performed in the morning or in the evening when all the bees are at home. Besides the fumigations, the entrance, alighting-board, and the ground round the hive, and any portion not reached by the vapor, should be washed with a solution of salicylic acid. This is done with an ordinary syringe. The foul-broody colonies receive every other evening one-sixth of a litre of syrup containing 30 to 50 drops of Hilbert's solution No. 1 (8 grammes or cubic centimetres of pure alcohol to 1 gramme of salicylic acid).

A foul-broody hive should be fumigated previous to its being opened, and all diseased brood cut out and thrown away, as few frames left as the bees can conveniently occupy, and if possible the bees should be forced to build new combs. All the hives in the apiary should be fed at least once a week with a syrup containing acid, while the disease lasts. After this treatment M. Bertrand found that at about the end of six weeks all trace of the disease had disappeared, and the convalescent colonies gave a good harvest of honey. I was glad to see that in all his operations M. Bertrand took the same precautions I have always insisted upon, and to the neglect of which so many have failed to cure their colonies. After a hive had been examined, everything used, as well as the hands, were washed in water containing 50 drops of solution No. 1 in 50 grammes of tepid rain water. A special dress made of linen, which can be easily washed, is used in operating; and the great care taken is shown by the fact that M. Auberson, although constantly manipulating amongst the diseased colonies, had not introduced the disease into his own apiary. These operations are very simple, but not one of the precautions taken can be dispensed with. I prefer to scald hives that contained foul brood, and I have my hives constructed with a view to this; but M. Bertrand pointed out that it would be very inconvenient to do so with such large hives as the Layens, and I also prefer to give my bees salicylic acid in their food whenever they have any. It is now several years since I cured my bees of foul brood, but they have always been fed on syrup containing salicylic acid in the proportions set forth in the *British Bee-Keepers' Guide Book*, and, although situated in an infected area, I attribute the absence of disease in my apiary to the constant use of salicylic acid in the food.

Near-Sighted.—A Lanarkshire bee-keeper writing on the question of the near-sightedness of queens, in the London *Journal of Horticulture* remarks as follows: "Some people are of the opinion that bees are not near-sighted—*i. e.*, cannot discern an object near them. I cannot endorse that statement, as I have repeatedly observed when bees were feeding under a glass cover, they started when an object was made to pass over or close to them."

The Fertilization of Flowers.

Mr. James Reid, a nephew of Mr. Robt. Reid, Collector of Customs at London, Ont., who is now a prominent resident of Paisley, Scotland, has devoted much attention to botanical subjects, and lately delivered a very interesting lecture on "The Fertilization of Flowers," before the Botanical Section of the Philosophical Society, from which we make a few extracts:

We all know, said Mr. Reid, that most flowers have their stamens and pistil situated together in the same flower; but we likewise know that many species bear those organs on separate flowers, although both kinds of flowers are found growing together on the same plant, whilst still other plants bear their stamens and pistil not merely in separate flowers, but in flowers on perfectly distinct plants.

It is evident that, when these organs are each situated on separate flowers, fertilization can ensue only when pollen from the stamens of one flower is carried by some means or other to the stigma of another flower of the same species. In the most of cases this is effected by insects, in a few instances by birds, and in others by the wind. The Scotch fir affords a well-known example of wind-fertilization. Doubtless the enormous quantity of pollen shed by this species is meant to make up for the great waste incidental to its method of transmission. Meanwhile we will confine our attention to plants bearing hermaphrodite flowers.

It was long supposed—indeed, until quite recently, and, I may almost say, within the lifetime of the youngest members of our society, it was the almost universal belief amongst botanists—that all flowers of this kind were self-fertilizing; but it is now quite well known that very many flowers, although hermaphrodite in structure, are unisexual in function. Some of our most eminent botanists are of the opinion that cross-fertilization is the rule with many flowers which yet have the power of self-fertilization; and experiment has shown that when one flower is fertilized by pollen from another flower, the resulting seeds give rise to healthier and more vigorous plants than usually spring from seeds of self-fertilized flowers. However, we shall see as we proceed, that, with some hermaphrodite flowers, self-fertilization is physically impossible, and that in such cases the most beautiful arrangements exist for ensuring cross-fertilization.

In the remarks which I have to make, I will draw my illustrations from a few wild flowers which grow freely around Paisley, and I will, for two reasons, take up no more than three or four species—first, because it is impossible, within proper limits, to deal satisfactorily with many flowers; and next, because the nature of the principle which we are considering, can be as well illustrated by three or four as by a larger number. I will also restrict myself to plants which I have for a number of years grown in my own garden, and thus have had opportunities of seeing confirmation of certain phenomena which have engaged the attention of botanists of acknowledged reputation. In many hermaphrodite flowers, the stamens come to maturity at one time and the pistil at another; and, of course, in such cases self-fertilization cannot take place.

Dichogamy is a technical term to indicate that the two sets of organs on the same flower are not developed simultaneously, but it does not tell us which of them ripens first. However, in flowers of this kind, the stamens generally arrive at maturity first; and, when this is the case, the flowers are said to be protandrous or proterandrous. But in many cases where both sets of organs are developed at the same time, insect agency is still essential to successful fertilization. We have a familiar instance of this in the common red clover (*Trifolium pratense*). Some naturalists affirm that the common red clover can be fertilized only through the agency of one of the common humble-bees; others are disposed to question the soundness of this opinion, although all appear to agree that insect agency is quite essential to its successful fertilization.

In the course of the late Darwin's numerous and valuable experiments, he found that 100 heads of red clover, when grown in the open air in the usual way, produced 2,700 seeds, but the same number of heads, when protected from bees, did not produce so much as a single seed. I remember reading in the newspapers, some 12 or 14 years ago, an account of the efforts of the Acclimatization Society, of New Zealand, to introduce red clover into that colony; but, although the seeds sent from this country yielded a fair crop of good plants, yet the plants thus grown totally failed to reproduce others "after their kind," and the failure was described to the absence of wild bees.

Like the red clover, the fertilization of the pansy is likewise due to the agency of insects, chiefly to the visits of one or more of the wild bees. As the pansy is believed to be one of the most highly specialized flowers not only in the British flora, but in the whole list of phanerogamous plants, it is very well worth the while of any one at all interested in the subject to take some pains to understand its structure and the contrivances which it exhibits to insure its reproduction from seed. The peduncle of the pansy, just below the flower, suddenly curves round to a position at right angles to its ascending axis, thus throwing the flower forward and downward. Look into the "eye" of the flower, and you will notice the round knob-like stigma, of a yellowish green color, situated almost right in the throat, so to speak, of the tube. This gobular organ you will likewise observe, is pressed closely down upon the front petal. Now, look beyond the stigma and in towards the very heart of the flower, and you will there see something having a more or less orange tint. This orange color proceeds from the broad and membranous prolongations of the connectives. I may remind some of you that the connective is what might be called the mid-rib of the anther. It usually terminates at the tip of the anther, but it is sometimes produced beyond it, as it is in this case, and very strikingly so in *Paris quadrifolia*. An anther with prolonged connective is analogous to a leaf whose mid-rib is produced beyond the blade. The stamens of the pansy have very short filaments—much shorter than their anthers. The ovary is conical in form, and the anthers are arranged completely round it, their dehiscing sides inwards, facing the pistil. The prolongations of the connectives thus take up a position near the upper part of the ovary, their tips meeting at the apex of the cone, but in such a way as to inclose a hollow space, with the ovary in the centre. Each of the two lower or front stamens throws out from the base of the connective a long spur. These staminal spurs project into the spur of the lower petal, and penetrates its whole length. The honey-glands are situated in the somewhat thickened ends of the staminal spurs, whence it drops to the bottom of the spur of the corolla, where it remains until sought for by some insect whose trunk is long enough to reach it.

I will not weary you with these structural details further than to mention that the stigma, which seems to guard the entrance to the honey-chamber, is quite hollow, and has a remarkable round opening in front. Below this opening, and close in contact with the petal, is a recurved lip or valve. There is a bend at what appears to be a weak part of the style. Having examined the flower thus carefully, we are now in a position to watch the effect of a bee visiting the pansy in search of honey. The insect alights on the broad front petal, thrusts its trunk under the stigma and downwards to the bottom of the spur of the corolla, where it can either sip what has trickled into the tube or take the honey directly from the secreting glands of the staminal spurs. Now, observe what happens. If the anthers are mature, or have been so for a short time, the pollen will, partly at least, have dropped through the slits between the anthers into the spur of the corolla, where it will be caught by the thick brush of hairs which seem to be placed there for this special purpose. The proboscis of the bee, on its way to the honey, must pass completely through this brush of hairs, and is sure to get dusted over with pollen; but, in withdrawing itself from the tube, the insect comes against the recurved lip of the stigma, which is consequently drawn forward and pressed across the orifice, thus effectively preventing any of the pollen from entering the cavity. Should the bee visit the flower just at the time when the anthers have ripened, but before the pollen has been shed, then when it touches the stigma, the style bends at the weak part, causing a movement of the ovary. This movement disturbs the encircling anthers; the hollow box opens, and the pollen, set free by the agitation, drops upon the bee, and is carried off by it to the next flower it alights upon. In following the bee to this other flower, we will see that in thrusting its proboscis beneath the stigma, it has to pass the open orifice, against which it must press with some degree of force. The pollen which it has brought from the first flower gets cleaned off its trunk, some of which is almost certain to enter the hollow chamber, thus securing cross-fertilization.

CORRESPONDENCE

For the American Bee Journal.

Hail—Bloom without Nectar.

ALLEN PRINGLE.

On May 18th ult. a violent hail storm passed over this section, and all the bees that were out were killed. As the weather during the preceding week had been unfavorable, confining the bees to their hives the most of the time, they came out freely that fatal afternoon, the weather being fine. The hail storm came suddenly, without warning, and laid the busy workers low in the dust. They could be seen after the storm, scattered over the fields close to the earth, dead; with their pellets of pollen still adhering to them. Aside from considerations of loss, the sight was one to excite feelings of commiseration for the industrious little heroes, and Shakespeare's couplet was forcibly suggested:

> "Blow, wind! come, wrack!
> At least we'll die with harness on our back."

The colonies which before this were in fine condition, were all more or less depleted; and some of them with not bees enough left to care for the brood which was plentiful. This unfortunate state of things necessitated a general balancing of forces throughout the apiary, and some "doubling up." Had I not promptly attended to this, the field loss, great as it was, would in all probability have been supplemented by a still greater loss of brood—possibly ending in "foul brood."

Such untoward and unexpected exigencies as these are the ones which test the apiarist. He is thus put to his "wits' ends," and at such times, unless he has principles to fall back upon, he will find himself at sea.

But the hail storm was not all. During two or three days of the past week, it was freezing cold, with high cold winds, and ice forming at nights. And to complete the chapter of adverse circumstances, the fruit bloom has come, and is about over, but has yielded no honey. This, to me, is anomalous. So far, in all my experience, I have never observed an abundant fruit bloom without nectar. I have had to feed my bees all through it, or they would undoubtedly have starved.

The absence of nectar in the bloom is, no doubt, due principally to the low temperature and the drying winds of last week. In utter perversity the weather this spring has been the worthy counterpart of that of last spring.

Ever since the bees were put out (about the middle of April), it has been a continual conflict with adverse (one would be pardoned for saying ill-naturedly, *perverse*) natural conditions. However, I suppose our only salvation from these meteorological ills (and *chills*) is to bring science and common-sense to bear, resolutely meet them, and parry them.

A part of my bees were wintered on their summer stands protected, and part of them in the cellar. I lost one of those which were outside, and one of those inside, after they were put out. All the others came through in excellent condition.

The one outside starved, though it had about 30 pounds of honey when I prepared it for winter. I account for the singular fact in this way: It was so well prepared, and so snug under the snow, and being one of the largest and best colonies, it kept up breeding all winter, until it had by March 1, consumed all its stores. Its *post-mortem* condition evidenced this.

Notwithstanding the very unfavorable spring, my bees are now in excellent condition, with the exception of 2 or 3 colonies. But they have no honey, nor are they gathering any to speak of. I am still feeding them, and will, no doubt, have to continue it until the white-clover bloom appears.

Many bees in this section died during the winter and spring; mostly, however, among the old-fashioned, non-scientific bee-keepers. One of this class, a neighbor (he does not take the BEE JOURNAL), said to Mrs. P. lately: "How is it that Mr. Pringle's bees live through the winter and spring and ours die?" The reply was that it was probably owing to the fact that the former knew how to care for his bees.

Now I do not suppose that the most careful and scientific apiarist can permanently escape winter and spring losses; but his average loss will be small compared with those of the careless and blundering bee-keeper. Bee-culture wants no sluggards or dullards. But the losses and disappointments consequent upon these traits, will have at least one good effect; viz., that of weeding out the careless and incompetent from our ranks. Not that the inevitable mistakes and losses of the earnest beginner determined to learn ought to be condemned—by no means; but the bee "dolt" who is too dull to comprehend scientific apiculture, or too negligent and careless to look after his industrious little exemplars, ought to be "weeded out;" and the Darwinian law of the "survival of the fittest will assuredly do it.

Selby, Ont., June 2, 1884.

For the American Bee Journal.

Haldimand, Ontario, Convention.

The Haldimand, Ontario, bee-keepers met at Hagersville on Friday, May 30; 25 members being present.

The minutes of the previous meeting were read and adopted. The first subject discussed was "The Best Race of Bees."

The chairman, Mr. R. Buckley, advocated the Italians as the best race of bees.

Mr. Kindree had not much experience with any except brown bees and Italians; but he preferred the Italians, or a cross between them and the brown bees.

Mr. Smith preferred the Italians for handling, but thinks that hybrids are the best honey producers.

Mr. Abbott said he did not know anything about the Italians; he had good success with the German bees. He noticed that some of his colonies were becoming hybridized by meeting with Italian drones, and that they were powerful workers.

Mr. Williamson said that anybody who had any experience in keeping bees would never say that the brown bee is better than the Italian; but he thought the hybrids were better than either.

Mr. Armstrong had kept both brown and Italian bees for some years; but he did not want any brown bees, or hybrids either, after this. The Italians were better workers and easier to handle; they work earlier and later, and defend themselves from robbers and moths far better than the brown bees. He read extracts from Prof. Cook's and A. I. Root's bee-books in favor of the Italian bee.

The Secretary spoke in favor of the Holy Land bees, or a cross between them and the Italians. His Syrian bees were better workers, and quite as gentle as Italians. They winter better, and build up more rapidly in the spring. He believes "the coming bee" will be a cross between the Syrian and the Italian.

"PUTTING UP HONEY FOR MARKET."

Mr. Williamson did not produce more honey than he could sell in his home market; but he thought that the small sections sold more readily. Extracted honey put up in glass jars sold about as well as section honey.

Mr. Armstrong put most of his honey in glass jars, and only lost two in shipment. When he sold honey in large quantities, he put it up in half-barrels. Comb honey should be in one-pound or two-pound sections.

The Chairman said he thought the smaller the package the more readily it could be disposed of.

Mr. Smith had tried both tins and glass jars, and preferred the glass for home trade.

The Secretary thought it would not make much difference how it was put up, after the people had tried the honey. He had used both tins and glass, and preferred the tin, on account of its cheapness and safety in handling.

"THE BEST METHOD OF INCREASE."

Mr. Smith preferred natural swarming for the reason that the bees lost no time, but went to work at once.

Mr. Kindree also preferred natural swarming for the same reason. In reply to Mr. Hull, he explained how to divide them.

The Chairman preferred dividing, and said that all good bee-keepers practiced that method; but care must be taken not to divide too much. It takes less time, and there is less danger of losing swarms.

Mr. Armstrong said if a man did not know anything about bees, he should not try to divide them, but allow the bees to manage for themselves. For himself he preferred dividing, as it was easier; but a laying queen should always be given to the new colony.

The following was reported by the members present, as the number lost during the winter: Fall count, 443; spring count, 353; loss, 90 colonies.

INTRODUCING A QUEEN TO A COLONY HAVING A FERTILE WORKER.

Mr. Kindree had not much experience in this line, but he once succeeded by putting a weak colony with a queen, into the fertile-worker colony.

Mr. Armstrong advocated breaking up the colony altogether, and giving the frames to other colonies.

The Secretary stated that he had succeeded in getting rid of a fertile worker by removing the hive to another part of the yard, shaking the bees off the frames, and then putting the hive back on its old stand. He then introduced a queen without any trouble.

E. C. CAMPBELL, *Sec.*

For the American Bee Journal.

Bees and Flowers.

CLARENCE M. WEED.

Every person at all acquainted with bees and bee-culture knows that without flowers bees could not exist; but it may be a new thought to some, at least of the younger readers of the BEE JOURNAL, that without bees flowers could not exist. It is proposed in a few short articles to give an idea of the mutual relations of bees and flowers, and of the views of eminent botanists in regard thereto. It will be seen that the subject is a much more interesting one than it would at first appear to be, and that for the beautiful tints and sweet fragrance of our most dearly loved flowers, we are indebted to the bee. Certainly it must be admitted that any bee-keeper who understands the philosophy of his calling, will make a more successful apiarist, as well as a broader and more cultured man.

Before discussing the subject proper, a knowledge of the structure of flowers is necessary. There are many flowers, which are not commonly called such, as those of the elm and ash, but these will be passed over and only those treated of which are of special interest to the bee-keeper. To illustrate flower structure, let us examine an apple blossom: The first thing noticed is that there are five white, or pinkish-white flattened portions which form the most conspicuous part of the flower and clothe the tree in beauty. These are the petals. On the inside of the petals are a large number of small yellow stems surmounted by a cap of the same color; these are the stamens, and are a very essential part of the flower, because they contain the yellow powder called pollen. At the centre of the group of stamens is a greenish stem differing from the stamens in size and shape; this is the *pistil*, another essential part of the flower. The lower portions of the pistil is called the ovary, because it contains the *ovules* or young seeds. In order that these ovules may develop into seeds, a particle of the pollen from the stamens must fall upon top of the pistil and penetrate it by means of a microscopic "pollen tube." This is the process of fertilization. But if this is done by pollen from the same flower, the ovule will in most cases not develop at all, or if it does develop, it will be much less vigorous than if the pollen came from another flower of the same tree; or still better, of another tree. Here comes in the aid of the honey-bee; its function, as regards flowers, is to carry pollen from the stamens of one flower to fertilize the pistil of another.

In the apple, pear, peach, thorn, and many similar flowers, the process of fertilization is very simple. The bee lights upon the blossom, and in so doing some pollen is brushed upon its head and body, some of which will be rubbed on the pistil of the next flower visited in its eager search for the honey secreted at the base of the stamens.

Lansing, Mich.

For the American Bee Journal.

Reversible Frames Once More.

M. M. BALDRIDGE.

It does seem that "the woods are full of them," for Michigan has been heard from again. I now refer to some exceedingly funny remarks on page 233 of the BEE JOURNAL, concerning "reversible frames."

The writer says: "When we have a frame all fixed so that it will reverse, *when we say the word*, of what advantage is it over a frame that does not reverse?" My reply is, please read carefully and critically what has been said in the BEE JOURNAL, and elsewhere, on that side of the subject, and then you will see for yourself. Now, please do not ask the advocates of "reversible frames" to fill column after column of the bee-periodicals with matter that would be a mere repetition of what has been said, and thereby *nauseate* the intelligent reader.

"When the combs are full of sealed brood, perhaps it might help the young bees to gnaw out, if we reverse the combs." This is evidently intended for one of those "funny" remarks, and I introduce it here simply to give everybody a chance to *smile* who feels like it.

"We have seen honey so *thin* that to reverse the combs would be sure to give the bees a job of house-cleaning." The writer now touches lightly upon a matter of some importance—but is he sure that he has made a statement of *fact?* or is it simply fancy? We have a "strain" of bees in Illinois (and they are not hybrids either) that has a knack of filling a comb with honey when it lies upon its face, and making it stay in, too! But suppose honey is so thin that it will run out when the comb is simply reversed, will that do any harm? And may it not after all be an advantage? That is, may it not hasten the "ripening" of the honey, if the bees are compelled to move it to some other part of the hive? By-the-by, what is the reason those wonderful hybrid bees in Michigan cannot be *strained* just a trifle more, so that they will not gather honey so thin that it will run out by simply reversing the combs?

"I can see no advantage" in reversible frames, but this may be owing to my "thick-headedness." The writer has possibly "hit the nail on the head" this time! But great men are often troubled with that complaint. Even the late T. B. Miner, the compiler of "The Bee-Keepers' Manual," a work that had quite an extensive sale 25 years ago, was sadly afflicted with "thick-headedness;" so much so, in fact, that he could not see that movable-frame hives had any advantage over those provided simply with *top-bars!*

The same is true to-day with many concerning the use of a honey-board when made properly. How few there are, comparatively, who fully appreciate the advantages of the style of honey-board so ably advocated by Mr. Heddon. So the writer will please console himself with the thought that other great men are often so "thick-headed" that they cannot always comprehend important discoveries.

St. Charles, Ill.

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For the American Bee Journal.

Priority of Location.

R. J. KENDALL.

Mr. Doolittle and Mr. Pond both attack this subject in the BEE JOURNAL for May 14. If I understand Mr. Heddon, he says just this: The man who begins to keep bees first in a locality, has priority of location—as a moral right. He then gives such bee-keepers a plan whereby they can maintain their right, if an intruder will not listen to reason.

That the first settler has a moral right of priority of location, seems to me undoubted. The legal right is another thing. Mr. Doolittle does not appear to dispute the moral right; but Mr. Pond attempts to turn the issue by saying one man has as much right to enter another man's locality as he has to set up a store beside him. Legal right, yes; moral right, no. The cases are not exactly alike—communities increase in population, localities do not in honey-flowers.

As a lawyer, I am not a little surprised at Mr. Pond's taking up the position he does; for law in its principle goes dead against him. The whole tenor of the writings of Blackstone, Coke, Justinian, and the American law writers, when treating of the principles of tenures and titles, go to affirm that the first occupant has a right to the selected locality. Discovery and first occupancy are the very foundation of title. The principle is so plainly recognized by the American law of pre-emption,and also by the free ranges over the public domain in the West by cattle and sheep men that I wonder all the more at his position.

So far as the point at issue in this matter of location is concerned, there is no difference between cattle and sheep and bees; or if there is, it is in favor of the bees—"they come home to roost."

Equity most certainly, if not actual law, would give the title to the first bee-keeper. Try it also by the rule of doing unto others as you would have others do to you, and see where this puts it.

Mr. Doolittle's contention appears to be thus: If Jones is a big property-owner near Kendall, who is a poor man keeping bees, that the big property-owner Jones can crowd Kendall out of the range by simply putting on his large range more colonies of bees than Kendall does on his.

Perhaps he can, and perhaps he cannot; and perhaps he will get so disgusted in doing it that he will eventually want to sell out to Kendall. Bear in mind these suppositions: Kendall is supposed to be an experienced bee-man, and up with the times; while Jones is not a bee-man at all, but seeing Kendall's success, wants to keep bees, and undertakes to crowd Kendall out. Kendall is supposed to have talked with Jones, represented to him that he (Kendall) has been in the business some time—it is his livelihood. To Jones it would be a mere adjunct, but both will be injured if Jones carries out his project.

Jones, however, says he does not care. The surrounding property is his, and the honey his also; he proposes to keep bees and collect it in self-defense. Kendall puts in more and more colonies. The average runs down in all the colonies, but knowing his business, Kendall keeps up the "racket" till he has his apiary as full as he can manage—there is a big lot of colonies, but the average is low, very low. Kendall knows just what he is doing; Jones does not. He has to buy hives, gets left more or less in doing so, and has to get bees. He gets stung, and mad, his swarms fly away, he loses or hurts his queens, gets the bees in "a deal of a temper" by his clumsy and awkward manipulations, and at their best, with scientific skilled treatment, they could only have secured Kendall's low average. But with Jones', ignorance, nervousness, and clumsyness, they have failed to get even that.

Do you not fancy, by the time he is through, Jones will be a pretty badly disgusted man, and feel like selling out? Besides, while he is messing with the three, four or five hundred colonies with which he is going to beat Jones out, what will become of his farm or other business. It will take him all his time to handle his bees. Then again, how many years will it take him to build up his apiary; and how many years will he have to neglect his farm or other business. Is it likely he will neglect a better business for a poorer (to him) one? Scarcely; his only other way then would be to hire an experienced apiarist to manage his bees; and he would have to pay such a man a salary that would, I think, in addition to the cost of hives, bees, etc., amount to such a sum as would make Mr. Jones a pretty sick man on bees; and begin to think the game of driving out Kendall was not worth the candle burned to play it by.

No, no, Mr. Heddon has given us a valuable hint if we have to fight such a case—a hint that will enable an experienced bee-keeper with a small acreage, to win, over an experienced but envious landed-proprietor every time, I believe.

Mr. Doolittle's plan is to speak soft words to the big man; Mr. Heddon distinctly said the same. If the big man listens to the kindly words, all will be well in Mr. Heddon's case as well as in Mr. Doolittle's. But in case the big man says, "I don't care," and will not listen to reason—what then? (And this is the case Mr. Heddon supposes.) I presume Mr. Doolittle would move out or agree to work the big man's apiary on a salary; but Mr. Heddon would do neither, unless he was compelled to—an unlikely contingency—he would stop and fight it; and if there is any truth in the statement that "knowledge is power," the chances are, Mr. Heddon would come out ahead, and his big opponent would be the under dog in the fight.

Every reasonable man believes that quiet arbitrature is best; but the trouble is, every once in a while a big fellow comes along who will not listen to reason, but presumes on his size, and purposes to despoil you. In such a case you must do one of two things—give up or make a fight for it. If there is no chance of winning, and you cannot win, you have to suffer loss; but if you can see a chance to win, fight it; and I fancy it may be shown that your science, experience and knowledge will be more than a match for size and presumption. No, Mr. Doolittle's landed-proprietor would not be the "smart*er*" man, but the "smart*ing*" one.

Austin, Texas.

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☞ The Iowa Central Bee-Keepers' Association will hold their next meeting on June 20, at Winterset, Iowa. A full attendance is expected.

J. E. PRYOR, *Sec.*
A. J. ADKINSON, *Pres.*

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☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

For the American Bee Journal.

Clipping Queens' Wings.

W. N. HOWARD.

In Mr. Stewart's reply to my question, on page 344, he rightly infers that I meant the period of gestation by the word *foal;* and as he has asked a few questions in return, I will give what I deem a sensible view of the matter.

I know of no bee-keepers (or any one else) who treat their queens as Mr. S. describes, in comparing them to the mare with her legs cut off. To be sure the interior of a hive, as a general thing, is dark; and this is no violation of any of the natural laws as regards a bee-hive; but to make the comparison parallel, as he puts it, would be to cut the queen's legs off as well as clipping her wing.

A queen with her wing clipped is not deprived of any of her organs of locomotion, neither is it any incumberance to the fulfillment of any duties that nature requires of her after she has mated with the drone, with the exception of flying with the swarm; and the assistance of man provides for this deficiency in a much more satisfactory manner than to let nature take its course. If the clipping of queens' wings is injurious, why does it not so prove itself?

Mr. G. M. Doolittle has for the past 13 years made a practice of clipping the wing of each of his queens (if I am correct), and he rears his own queens; yet he makes the best report of comb honey (length of honey flow taken into consideration) of any bee-keeper in the known world; and he is each year improving his bees by careful breeding.

In a certain sense all animal life is governed by the same universal law in some of its details; but certain details which could be applied with success to one part of the animal kingdom, would be disastrous if applied to other parts.

True, queens do sometimes fly from the combs while being handled, but it is generally caused by their being disturbed; but do they produce better bees or larger yields of honey than the colonies by their side whose queen has a clipped wing?

The fact that a mare may be worked to within 15 minutes of the birth of the colt, does not prove that the colt would not have been just as strong and vigorous if the mare had been allowed to roam at her own "sweet will" in the pasture.

Perhaps Mr. S. will say that a queen with a clipped wing is prevented from going where she might wish to, and yet she is not prevented from doing all the duty that nature intended her to perform in all parts of the hive.

I am aware, as Mr. S. says, that a scare or other mental excitement of a disagreeable nature, often makes strange and woeful impressions, etc.; but can Mr. S. present any evidence that a queen has a mind, and is endowed with mental faculties? If so, could not she be taught to perform more duties than her instinct now prompts her to do? Why not educate her to share her domicil with other queens, to assist in the egg-laying duties, to care for the brood, and if needed lend a helping hand at honey gathering? And what a boom it would be to the queen-breeder if he could educate queens to allow queen-cells to remain undisturbed in the same hive until hatched.

In Mr. S.'s description of allowing the mare to enter the match, he has given no conditions that were not prompted and brought about by nature, and he simply allows her to follow her instincts as far as his judgment tells him it is good for her. But is such a course of treatment as he describes practiced by breeders of horses noted for speed? In compelling the queen to fly, he forces her into an act that her instinct tells her is not needed; and if it does her no harm, it certainly is of no benefit.

Again he says: "In the production of colts, bees or anything else that has life, the parents reproduce themselves, and neither the mental nor physical condition of the offspring at birth can in any way exceed the combined condition of the parents." Here his doctrine is not sound, as will be seen by the evidence of Dr. J. S. McAllister, page 264; and also Mr. Geo. E. Boggs, page 150.

That bees can be improved and bred up to a high standard of excellence there is no doubt; for it is being done by some of our best breeders; but the methods they employ are not tossing their queen-mothers up and teaching them habits of idleness and neglect of home duties.

Derby, Vt.

* * *

For the American Bee Journal.

The Honey Flora of Arkansas.

A. R. NISBET.

Clark county, Ark., is situated between the mountain and the swamp lands of Arkansas, and boasts of containing some soil as rich as can be found in the Southwest.

Red elm is the first to yield pollen, and it generally blooms about Feb. 1, and lasts one week. If the weather is propitious when it is in full bloom, the bees will gather pollen as well as at any time during the summer. Wild plum and peach bloom about March 5; and bees here generally get a good start in brood-rearing while the bloom continues. Cotton-wood and red-bud greets us in gorgeous robes of various hues about March 25, and bids us get our hives in readiness for the forth-coming swarms. They bloom for a week, and sometimes ten days, after which we have a scarcity of bloom until May.

Ratan is one of our best honey-producing plants. On May 5 is about its average time of beginning to bloom, and it lasts from 10 to 15 days. The honey gathered from it is of a beautiful rich color, and of excellent flavor. It compares favorably with that gathered from linden, but is not quite as bright The holly opens a little later than the ratan, but before the latter ceases to bloom; and together they make a honey-flow which is hard to excel.

We very often have a great deal of rain at that season of the year, and sometimes lose nearly all of the honey; but the fault is not in the bloom. At the close of this honey flow, I extract the honey from every comb in the apiary, which has honey enough to pay for the trouble. I do that to keep our nice honey separate from the chincapin honey, which begins to come in about that time.

The honey gathered from chincapin bloom is dark and very strong; and another extracting takes place when it is all gathered. This time I extract only from upper stories and outside combs of colonies in single-story hives.

We are now ready for the linden or basswood honey, and it is generally ready for us by June 10.

I will probably say something in the future about our summer and fall flowers. I would like to meet all the practical Arkansas bee-keepers at our State Fair next fall; also as many from other States as will come. Let us meet and organize that convention we talked of last fall.

Dobyville, Ark.

* * *

Read at the Somerset, Me., Convention.

Wintering Bees on Summer Stands.

ISAAC HUTCHINS.

Previous to the last two years I had wintered my bees without loss, and it was by uniting all small colonies in the autumn and contracting the hives by division-boards to the requirements of the colonies, cutting passage ways through the combs, and leaving no combs in the hives that contained less than 3 or 4 pounds of honey, and packing the hive in an outer case or house with chaff or dry sawdust, using a chaff cushion over the frames, and leaving the entrance open ⅜ of an inch by 5 inches, and not allowing it to become clogged with dead bees or ice.

A year ago last fall, being pressed for time, I neglected to unite any small colonies, or to cut passage ways through the combs; but instead, I placed three sticks, ¾ of an inch square, across the frames, so as to give the bees a passage way over the combs. In some of the small colonies I contracted the hive by division-boards, and they came through nicely; but the most of them had the whole hive, and some of the combs contained but little honey, and such combs were, in most cases, in the middle of the hive; and some colonies ate all the honey out of these middle combs and one end of the hive, and died on the empty combs with plenty of honey at the other end of the hive. The entrance was open ⅜ by 5 inches. Loss, 25 per cent.; cause, starvation.

Last autumn I packed my bees in the same way, only the combs containing the most honey at one end of the hive, and contracted the entrance to ⅜ by 1 inch. I think 2 colonies died by suffocation from the entrance becoming clogged, and the remainder by starvation, with plenty of honey in the other frames next to them. In some cases they had passed over and taken a little honey from the top of the comb, and then died with plenty of honey just below them. Loss, 25 per cent. From these experiments I draw the following conclusions:

1. That it is better to reduce the size of the hive in the fall, to the size of the colony.

2. That each comb should contain sufficient honey to last what bees cluster on it, until the first or middle of April.

3. That passage ways through the combs are more reliable in cold weather than any other way.

4. That much open-space above the combs is an injury, as bees will sometimes cluster there in cold weather and starve to death with plenty of honey just below them. I do not think they ever move downwards for food when it is too cold for the cluster to break.

5. That it is better to remove those frames that contain much pollen, in the fall, as it is not suitable food for bees in the winter season, and it occupies room that should be filled with honey; but such combs should be returned to the hive in the early spring, so that it might be used up in brood-rearing before they can get a supply from the flowers.

Wellington, Me.

For the American Bee Journal.

Will County, Ill., Convention.

The meeting of the Will County Bee-Keepers' Association was held on May 26, 1884, at Monee, Ill., and was called to order by the president, A. Wicherts. Secretary Nelson being absent, G. Kettering was elected to that office. After roll-call the President read a brief essay about bees and bee-keepers, which was very interesting. The committee reported a constitution and by-laws, which was unanimously adopted.

The following topics relating to bee-culture were then discussed: 1. "Indoor or out-door wintering." 2. "Is it wise to encourage everybody to keep bees?" 3. "Prevention of robbing." 4. "Transferring bees." 5. "The difference between the bright Italian and the leather-colored bee."

The first topic was then discussed, and a majority of the members concluded that they had better success in wintering their bees in a good, dry, ventilated cellar—especially weak colonies and nuclei. However, several preferred out-door wintering if the bees are well protected.

Mr. C. Schreier's opinion on the second topic was, that every man ought to keep bees to produce his own honey. The prevailing opinion was, though we should encourage all to keep bees, we should tell them not only the *advantages*, but also the *disadvantages* of bee-keeping.

Concerning the third topic, the President stated that he had a colony which was robbed. He first put a wet bag on the hive, so as to let the water drop down in front of it, but it had no effect. He then followed the robbers to their own hive, opened it and disturbed some of their combs to make the honey run out of the cells; this gave them work at their own home, and the robbing ceased.

About the fourth topic, all thought it advisable to transfer bees from all box-hives into movable-frame hives.

The prevailing opinion concerning the fifth topic was, that the leather-colored bee is a cross between the Italian and a dark-colored German bee.

The question about deep or shallow frames was discussed at some length. Mr. C. Schreier is altogether in favor of the Langstroth frame, while Mr. A. Wicherts claim that a short, deep frame would be preferable because bees could have more honey above them, and they would winter better. Bees ought to have honey enough above them where they cluster. But as for handling during the honey season, he would prefer a shallow frame.

Mr. W. Cassens was elected Treasurer, and the sum of 25 cents from each member was collected.

The convention then took a short recess. After resuming business again, several new members joined the association. It was decided that the next regular meeting should be held on the first Monday in September, at 1 p. m., in Monee, Ill. After tendering a vote of thanks to Jos. Jordan, for the free use of his Hall, the convention adjourned.

GUSTAVUS KETTERING, *Sec.*

For the American Bee Journal.

Increasing Colonies by Division.

J. M. HICKS.

It has been many years since I first practiced increasing my colonies of bees by the above method of swarming, and thus saved a great deal of trouble as well as time in waiting for them to swarm at will; which I think is money to the bee-keeper who desires to prosper in the business of keeping bees for profit.

I am well aware that many object to the management of bees on any other than the old style, and say, "let the bees swarm naturally if you would succeed, as did our fathers;" but I desire different success from that of 50 years ago, when we so well recollect how father, mother, and sometimes grandpa as well as grandma frequently came over to show how to hive bees when they should swarm; and of all the whang-to-bang-bangs and jingling of cow-bells, played so as to get the bees to settle, frequently resulting in a total failure. Often the bees would return to the hive from which they came out, and sometimes going off to the woods, for there was plenty of woods here in the Hoosier State about that time, and were thus lost, or failed to cast a swarm at all.

It is a well-known fact, too well established to be misunderstood by any one except an old-time bee-keeper, that two-fifths of the colonies which are allowed to swarm in the old way, are lost by going to the woods. While it is a well established fact to the more modern and scientific bee-keeper that a swarm produced by dividing a colony, at the right time, there will be no trouble about losing a swarm, or having them come out and leave the hive.

I think that it is much easier to swing the brood frames out and select such of the brood as is fit for putting into a new hive of the same shape and size (which they should all be); thus making up your new colonies in five to ten minutes. This should be so managed as to come as near to the time when the oldest of the brood would have swarmed had they been left to luck and chance.

But says one old fogy, "How are you going to do all this and not let the bees swarm in the old way?" Truly, this old question is a poser to us; but we must make ready one of our improved hives, just the same as all the bees are in, and we set it by the side of the hive of bees that we think is ready for dividing. We now swing the doors open and take out a frame from the middle of the new hive, then open the strong colony of bees, and swing the brood frames apart carefully, and we find the frame on which the queen is situated. Perhaps she is laying eggs at the rate of a hundred per hour; but we now lift the frame of brood, queen, and adhering bees on the same, and hang it in the new hive in place of the frame just taken out, and then hang the new frame in the old hive, and close up both hives carefully.

Put the new hive with the frame of brood, bees and queen, in the same place where the old hive stood, and move the old hive some distance off to a new location. Now, the work is done, the old colony which would have swarmed, returned to the new hive at the old location, thus strengthening them, and goes to work with a will, already having one sheet of brood, eggs, and the mother-queen as a start in house-keeping.

Battle Ground, Ind.

☞ Cook's Manual in cloth and the Weekly BEE JOURNAL for one year will be sent for $3. Manual and Monthly, $2.00. We have no more of the old edition left, and, therefore, the club price of that edition at $2.75 and $1.75 is withdrawn.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

Local Convention Directory.

1884. *Time and place of Meeting.*

June 19.—Northern Mich. at Ionia.
F. A. Palmer, Sec.

June 20.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Honey-Dew.

There is a dearth of bloom here at present. The first few white clover blossoms just making their appearance. Yesterday I noticed that the bees were working rapidly, darting away with a jump from the entrance, and upon returning they entered at once—there was no loitering. I knew honey must be the field, and I went to find where it could be. I found the bees busily at work on the leaves and some of the twigs of the maples. I send a sample of leaves and twig. There is a sweet substance on the leaves. Is it honey dew? The bees were sucking around the little wart-like protrusions on the twig. What are they? Please answer in the Bee Journal. W. B. Dresser.

Hillsdale, Mich., June 2, 1864.

[Yes; it is what is usually called "honey-dew"—which is reported to be quite plenty this season. It is the excretion deposited on the back of the leaves by small insects called aphidæ or vine-fretters. The fecundity of plant lice is almost incalculable. Reaumur supposes that in one year there may be 20 generations; and he has proved by experiments that one of these insects may be the parent of 5,904,900,000 descendants during its life.—Ed.]

Honey from White Mustard.

I lost quite a number of colonies in wintering. The honey they gathered late last fall was not good, I think; for it was those which died that fed on late honey; and those which had early spring honey came through in good condition and are doing well now. They have been working on the white mustard bloom for the last two weeks, and some of it has bloom over 8 inches long. It grows about 3 feet high, flourishes best on cultivated land, and is a sure crop twice a year—once for a June, and the next for a fall crop. I have also a fine lot of Rocky Mountain bee-plant for the bees to work on during July and August. It is a sure crop any where. If sown in the fall it yields fine honey, and keeps in bloom for a long time. My cure for bee stings is alcohol. I always keep a small quantity in the bee-yard and apply a little to the part stung when it prevents any swelling whatever; but I find what will cure bee-stings on one bee-keeper will have no effect on another. Jas. Jardine.

Ashland, Neb., June 9, 1884.

Good Work.

The season, although cold till within a few days, has been very promising with me. By slight feeding every night, brood-rearing has been fully kept up, and my colonies are now in No. 1 condition. During the week ending May 31, one colony of pure Italians gathered 72 pounds of honey from apple bloom; and the other colonies produced an average quantity. The prospect is fair now for a good yield from white clover; still we may have it spoiled by a drought. So far in June the weather has been very warm. J. E. Pond, Jr.

Foxboro, Mass., June 7, 1884.

Damaging Floods in Texas.

We are having too much rain for bees or anything else. Such floods were not seen here since the days of Noah. Thirty-two inches of water fell in 16 days; and 20 inches of it fell in 48 hours. The farms are washed away, crops are badly damaged, and millions of dollars worth of property destroyed. Railroad bridges are all gone, and the mails are slow. Horse-mint is now blooming, and if we can have nice weather, we will get a fair honey crop this year. I have been looking for a report in the Bee Journal of the Texas Bee-Keepers' Association, as it was selected as the bee-paper in which to publish the proceedings. Seventy-one full colonies and 100 3-frame nuclei is my report now. B. F. Carroll.

Dresden, Tex., June 4, 1884.

[The report you mention has not, as yet, been received.—Ed.]

A Great Loss.

Owing to the extreme drouth of last fall in this section, a large number of colonies of bees starved to death during the past winter and this spring. What few colonies are left, unless they were fed early in the spring, are still weak. White clover was never better. Strong colonies are doing splendidly at present. Wm. Robson.

Rolla, Mo., June 9, 1884.

Good Results in Wintering.

My 101 colonies of bees were left on the summer stands, and were fixed up last winter simply by placing sticks across the holes of the tops of the close-fitting 12x12 frames, tucking quilts over the same, contracting the entrances to the hives, and thus severely letting them alone until May 1. The result is: 95 colonies are in excellent, active condition; 6 died from being out of stores. I do not use the extractor, but work my bees for comb honey exclusively. I feed them no "slops," but winter them on the best ripe, sealed honey. I use no chaff or double-walled hives, and have always succeeded in wintering bees with but little mortality, and to my own entire satisfaction. H. S. Van Anglen.

Waverly, Mo., June 9, 1884.

Those Trembling Bees.

On page 364 of the Bee Journal, a correspondent writes about trembling bees that are killing off small black bees. I have a colony that has been acting in a like manner for a fortnight. I opened the hive and could see these shiny blacks among the Italians on the combs. It appears to me that these little shiny ones originate in the colony which is infested by them. In the Dictionary of Practical Apiculture, recently issued, I find the following: "Robber bees that have lost their hair, and become black and shiny, were supposed by Huber to be a distinct kind of bee; and in several works they are mentioned by the name of black bees." I caught a black one, a few moments ago, and tried to make it sting, but it did not. I tried the same experiment before, and the bee made a very feeble attempt at stinging. I saw the same thing several years ago. The colony thus infested is quite populous, and apparently all right. The query is: Where do the trembling Italians and shiny blacks come from? If they are robbers, why do they not attack weak colonies? Why persist in attacking a strong one for weeks? And, what makes the Italians tremble? Mrs. L. Harrison.

Peoria, Ill., June 10, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Fastening Foundation in Sections.

Will Mr. Heddon describe as explicitly as possible through "What and How," the manner of using the Parker foundation fastener? Mrs. E. L. Swartwood.

Clearfield, Iowa, June 3, 1884.

Answer.—Yes; and I shall be glad to do so. In my estimation this fastener will never be equaled by any other that does not have the sliding-back movement, and any that does is a Parker fastener, is it not? When these machines are turned out from a manufactory, they are not fittted up. The receiver must adjust the screws (if they need it), and see that the bearing is equal on all sides and corners; that the section-rest is added to or taken from, in accordance with the width of the section. You should have a little board, say 6 or 8 inches square, nailed in front of the fastener as a rest. The fastener is, of course, screwed fast to a solid table or bench. Tack rests on this little board near the fastener, to guide the section quickly to place, and keep it from moving to the right, left, or from you.

We have also made "ways" or guides for adjusting the side-wise position of the sheet of foundation. We also may have one to adjust its position regarding the amount of wax we mash down, provided that the pieces of foundation are all of one size. We do not value the "ways" for the foundation very highly, and seldom use them, as our eye and nerve adjusts it very quickly without any guides. See that the edge of the upper piece that does the mashing is coated with honey every few sections. Have the honey diluted about half-and-half with water. This honey can be applied with the fore-finger, or a little stick. After a while the fastener will not stick if lubricated every 20 or 30 sections. Set it so that the edge of the masher will over-reach the centre of the narrow piece of the section about 1-16 of an inch when pushed down and forward all it is capable of reaching. Then having the section and about ⅛ of an inch margin of the foundation under the masher, lift up on the lever quickly and powerfully, and the foundation is fastened much firmer than can be done by melting it on to the wood. After all this talk about a 25-cent machine, I presume that it is still not clear to those who have never used one.

Establishing Apiaries.

1. I am establishing two new apiries of 75 colonies each, and wish to ask Mr. Heddon whether the apiary grounds should be sown to lawn grass, white clover, or what?

2. How near to the apiary should the honey-house be, and on which side? or should it be in the centre?

3. How far apart each way should the hives be placed? and should the apiary be hexagonal in form?

4. Is sugar syrup equally as good as honey for brood-rearing?

F. M. Cheney.

Answers.—1. The color, green, is best fitted to the eyes. On some other accounts the lawn grass is best of any thing for an apiary carpet. Where there is no special danger to be apprehended from fire, I prefer the ground perfectly clean from all vegetation, and covered with 2 or 3 inches of sawdust, and kept so with a basket and hoe. Next to this I choose the lawn, and in that case I desire the sawdust about and under the stands of the hives, for it is very difficut here to keep down the grass too close to the hives to use the scythe or lawn mower.

2. This depends upon the amount of natural swarming expected. Where there is but little, I prefer the honey-house in the centre of the apiary; where there is much, I wish it at one side. In this latter case, your bees cannot swarm "over on the opposite side of the house" entirely, or, for some time, unobserved. It also enables you to drive close to the house. If you are running for extracted honey, the central location has more advantages then if running for comb. I would decide according to the above conditions.

3. I prefer rows about 6 to 8 feet apart, and the hives placed about 8 to 10 feet apart in the rows, alternating with each other thus:

. . . .

. . . .

. . . .

and all fronting the east. I should care nothing for the form or outline shape of the whole apiary, which would most economically be square and filled with hives. I prefer and use a high board fence all around the apiary, and two strands of barbed fence-wire just above this.

4. I think not, for the same reason that it is so much better winter food. It lacks the nitrogenous element which clogs the intestines of the old bees during cold and confinement, and which is so eminently adapted to the growth of animal tissue, as in case of brood-rearing, where the bees can gather plenty of pollen, with that it works nicely; but when pollen is scarce, I should prefer honey.

Apiaries near Highways.

1. How near to the road can an apiary be located without danger to the traveling public?

2. Does the law establish the distance bees should be kept from the highway?

3. If the bees should attack a team in passing, and cause them to run away, resulting in injury to themselves and driver, would the apiarist be liable?

4. How near to the road are your bees? Chas. Sitts—18.

Brasie Corners, N. Y., June 3, 1884.

Answers.—1. The actual distance depends upon two conditions: the disposition of the bees, and what fixtures may be between the road and the bees. I never had any trouble with a large apiary 3 rods away, with a tight board fence 6 feet high between.

2. I am not aware whether the law of any State does, or does not.

3. I feel quite sure that he would, if it was evident that the attack came about because the bees considered the team too close to their home and stores; for in that case the apiary is too close to land not owned and controlled by the apiarist.

4. The fence (8 feet high) of one of my apiaries is on the road line, but the bees therein, from breeding and management, are but little inclined to sting, though they are nearly all hybrids. The last time I was there, I led my horse twice through the apiary, close up to several of the hives, when the horse was warm, the day hot, and the bees were robbing; but he received no stings, though I knew we were taking the risk of a javelin, but *one* would not have done much harm. My other apiary here is away from all other lands.

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Honey and Beeswax Market.

Office of The American Bee Journal, }
Monday, 10 a. m., June 16, 1884. }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. CHAS. F. MUTH.

NEW YORK.

HONEY—Present quotations are as follows: Fancy white in 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market.

BEESWAX—Scarce, and sells readily at 36@38c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—Choice white comb honey in 1 lb. sections brings 18c; in 1½ to 2 lb. sections, quotable at 16c. Comb honey discolored and in undesirable shape is selling at 10@12c. Extracted honey is in light demand at 6@8c. Manufacturers of syrups and bakers say that the low price of sugar is the reason why they do not use as much honey as formerly. There is very little desirable comb honey on the market.

BEESWAX—Is scarce and fancy yellow brings 38c. Good beeswax, but dark, and having more or less of refuse matter in it, quotable at 30@33c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—A little new extracted is on the market, but is not receiving much attention, buyers being rather timid. Several small lots of old extracted arrived within the week, mainly off quality, and the same are offering at low figures. Some very choice old extracted was sold at 7c., which is at present an extreme figure. The demand is very light, and the tone of the market weak. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 6@7c; dark and candied, 4@5c.

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—The season has now practically closed, little or nothing being done in comb honey, and prices entirely nominal. Extracted quiet at 7@8c. One lot, about 5,000 lbs. new honey, received from the South this week, and partly sold at 7c. It is dark but of fairly good flavor.

BEESWAX—I have a little that I am holding at 35@40c, according to the quality.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8c.

Geo. W. Meade & Co., 213 Market St.

* * *

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy **5** cents, postpaid; per dozen, **40** cents; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

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We will supply them by the dozen at 25 per cent. discount, post-paid.

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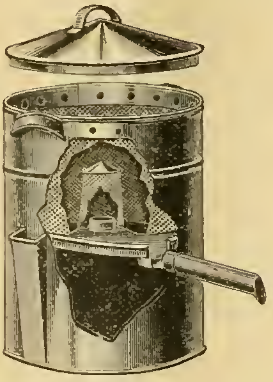
EXCELSIOR
WAX EXTRACTOR



The advantages of this Extractor are :

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Also Hives, Smokers, Foundation, etc.

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INSTRUCTION IN BEE-KEEPING.

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

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Or, MANUAL OF THE APIARY.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

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State Agricultural College, LANSING, MICH.
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Circulars and samples free. Send for them It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.

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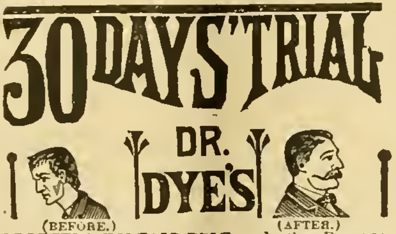

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We want a local reporter in every farming community to furnish us from time to time such facts as we may require. Full particulars regarding services, compensation, etc., will be furnished on application. Address Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
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Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

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SEND A POSTAL CARD TO THE

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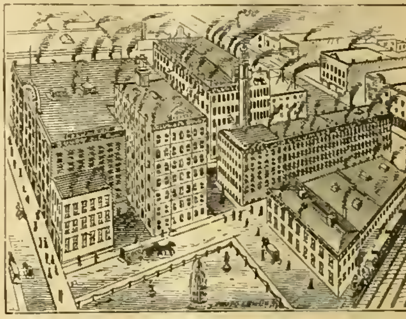
When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



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☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

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is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

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It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
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We are now ready to Book Orders for

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White Poplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

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GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY**, Wenham, Mass.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine.
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Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**
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☞ Send 10c. for Practical Hints to Bee-Keepers.

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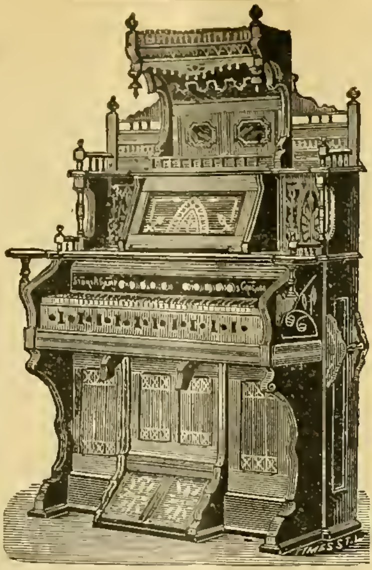
YOUNG AMERICA, a large light page 32-column illustrated 50 cent Monthly, free one year to all that enclose this advertisement to us now with 15 cents. Sure to please all Boys and Girls. Address,

YOUNG AMERICA,
24A2t Lock box 675, Canal Dover, Ohio.

1884. JOSEPH D. ENAS, 1884.
(Sunny Side Apiary,)

Pure Italian Queens, Bees, Colonies, Nuclei,
EXTRACTORS, COMB FOUNDATION, &c.
24D10t Address, Sunny Side Apiary, NAPA, CAL.



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Territory given. **Agents Wanted.** Protection guaranteed.

Catalogues free to any address.
Write for our prices before buying elsewhere.

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WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,
May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,
B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,
G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½	inch	$2 00
Conqueror smoker (wide shield)	3	"	1 75
Large smoker (wide shield)	2½	"	1 50
Extra smoker (wide shield)	2	"	1 25
Plain smoker	2	"	1 00
Little Wonder smoker	1¾	"	65
Bingham & Hetherington Honey Knife, 2 inch			1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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GIVEN FOUNDATION.—As I have purchased a Given press, I will make Foundation on the same, this season. Will take Beeswax in exchange for Foundation or work it up for two-fifths.
23D4t A. WORTMAN, Seafield, White Co., Ind.

Rise in Prices of Foundation

The prices of Comb Foundation are NOW **advanced two cents per pound** from the quotations in our retail Price List, and **three cents, per pound, at wholesale.**

CHAS. DADANT & SON,
23ABtf Hamilton, Hancock Co, Ills.

BEE-KEEPERS, before ordering your

APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 5 cents per pound** above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

BEESWAX.

I pay **34c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

NEW AND USEFUL

Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY**, Wenham, Mass.

1868. 1884.

HEDDON'S

COLUMN.

BEST GIVEN

COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

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Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

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DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition
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BEES and HONEY,
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Management of an Apiary for Pleasure and Profit; by
THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
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It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street. Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
GEO. B. PETERS, M. D.

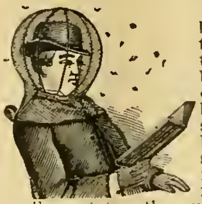
We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,
Lock box 995, Belleville, St. Clair Co., Ills.
18A13t 6B3t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

ALFRED H. NEWMAN,
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CHICAGO, - ILLINOIS.

A PRIZE,

Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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STANLEY'S
Automatic Honey Extractor
AND SMOKER.

Send for descriptive Circular and Prices to
G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

HIGH SIDE-WALLS!

On or before June 10, all ordinary sized frames of Eureka Comb will be for sale at 15 cents each. Langstroth Frames in stock. Other sizes subject to slight delay. This includes a sheet of comb with higher side-walls than any now in use, on which a swarm can be placed with safety. It has a well-made frame. Samples free. Now ready.

A sample of the Eureka Queen-Cage free to dealers. Address,

E. B. WEED, 95 W. Second St. Cincinnati, O.
Or A. H. NEWMAN, Chicago, Ill.
CHAS. MUTH, Cincinnati, O. 25A1t

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK C ., Portland, Me. 4A1y

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ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid .. .. in May and June, each	$ .50
Italian—untested—not warranted, in May and June, each	1.00
Italian—warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

J. W. ECKMAN,
DEALER IN
Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

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OLDEST BEE PAPER IN AMERICA

THE WEEKLY

BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., June 25, 1884. VOL. XX.—No. 26.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISBED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1.**

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

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THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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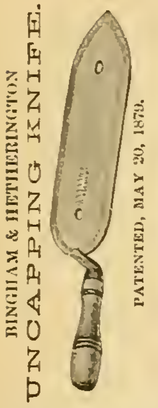
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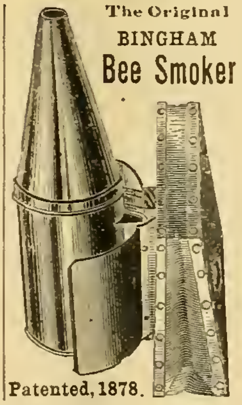

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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JUNE 25, 1884. No. 26.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Honey and Digestion.

"All foods," says an exchange, "if not already soluble (meltable) in water, have to be so altered within us that they become dissolved, and we call this solution, digestion. Starch, for example, which forms five-sixths of our daily bread, is utterly ineffectual to use while it remains as starch, because of its insolubility; but in the act of chewing, the saliva which we add to our bread begins to convert the starch into a sugar (very much like to the sugar of honey), and so renders it soluble in order that it may in due course be carried into our blood, and there do the work of giving us power or heat. Cane sugar, in like manner, although soluble, requires alteration, and this alteration is also brought about by contact with the saliva, and the result is a sugar, as in a previous case, nearly identical with the sugar of honey. Honey, on the contrary, or the sugar that we find in grapes, is *already* in the condition for absorption or assimilation, and really no kind of work has to be performed upon it before it is actually rendering us service as a force, or heat-producer." Honey is, therefore, given to mankind, in the most agreeable form, both for food and medicine. It produces healthy digestion, and holds defiantly that monster of torture, indigestion, at bay. Pure honey should be used freely in every family. Honey eaten upon wheat bread is very beneficial to health.

Children would rather eat bread and honey than bread and butter; one pound of honey will reach as far as two pounds of butter, and has, besides, the advantage that it is far more healthy and pleasant to the taste, and always remains good, while butter soon becomes rancid and often produces cramp in the stomach, eructations, sourness, vomiting and diarrhœa.

Digestion (all-potent in its effects on the mind as well as the body) depends largely on the food. Poor food received into a poor stomach is the cause of many unhappy homes—while good, healthy food, received into a healthy stomach, becomes "an Angel of Peace" to many a household.

* * *

Docility of Cyprian and Syrian Bees.

A correspondent in the London *Journal of Horticulture*, when writing about controlling Cyprian and Syrian bees with smoke, remarks that they cannot even *smell* it or be jarred without making them irritable. If they are kept from smoke and handled gently, and the hives are opened only when the sun shines, he claims that they are perfectly docile and gentle; and that those who have found occasion to condemn them on account of their irritability, have been dosing them with smoke or handling them without care. As proof that his theory is correct, he says that "Mr. Benton in Cyprus had 500 colonies placed round his house, on the veranda, or anywhere where they could stand. One hive in particular was so placed that it had to be passed within 2 feet from the entrance scores of times each day by every visitor or inmate; and though Mr. Benton was working amongst them from early morning to late at night with no protection whatever, save a hat, shirt, pants, and slippers, no one was ever stung, and he very rarely. We have Mr. Blow's authority for saying that he saw Mr. Benton open hive after hive without veil or gloves, and none ventured to sting." Possibly this may account for the many conflicting opinions given by our American correspondents relative to the Cyprian and Syrian bees, and their irracibility. Let some who have these bees in their purity, try it and report the result.

This writer approves of the crossing of Cyprian queens by Syrian drones, and then says that "it is only by crossing these foreign bees that we may hope to produce superior varieties. It has been done in every other branch of the animal and vegetable kingdoms, and why not with bees? for with all their virtues—which should make us more anxious to improve them—they are only wild bees we are cultivating at present. Cyprus gave us the cauliflower, and who would recognize the original in the immense varieties of broccoli and cauliflower, or would banish it from our gardens? And may not one or all of these bees produce a breed of bees as distinct and valuable to the present as the Magnum Bonum potato is to its first parents? Let us go about this matter in an intelligent manner, each adding his mite; and for the present those who want a good crop of honey and plenty of bees in the spring to fertilize their abundant fruit blossom, I would advise such to try the first cross of Syrians with pure black drones." With this idea in view, "crossing" is now being done largely in America in the hope of producing "the best bees in the world."

* * *

The Honey Season in Cuba.

Mr. A. W. Osburn, S. Miguel, Cuba, W. I., writes thus on June 14, 1884:

We are in the midst of our wet season. The wet season here differs from anything of the kind I have ever seen in any country. It is a succession of showers, then bright sunshine, and then more showers and more sunshine. And, of course, as this is a tropical climate, the rain is warm, and vegetation of all kinds grows wonderfully fast. The flowers thrive and bloom; thus furnishing plenty of feed for the bees; but the honey flow is not extravagant, the honey is not light in color, and its flavor is fair. After being here 9 months, I conclude that the main honey harvest is in the winter months, and then it is a harvest indeed, by far excelling anything I ever witnessed in any country.

Call Things by their Right Names.

Some time since Mr. D. K. Boutelle sent us the following criticism on this subject:

I was much interested in the Editor's remarks under the above caption in the Bee Journal of Nov. 28, 1883. In his treatment of such expressions, as he "wintered" his "stands in the cellar," "they came out in bad shape." etc., he indicates clearly that, so far as possible, we ought to use terms or words in such a way as to correspond with their usual or dictionary definitions.

This, I think, is right, and that it is an important point to consider in establishing nomenclatures for apiculture. When we have anything so new that there is no convenient term to express it, then it will be time to coin a new name; but do not let us attempt to apply new definitions to old words. If it is done, it seems to me it would tend to confuse.

While we are about it, is it not better to adopt a vocabulary of bee-keeping terms, somewhat in harmony with a standard dictionary rather than in violation of it? With this idea in mind, I wish to offer a little friendly criticism on two of the terms put forward by the Editor.

He says: "A colony of bees is an organized body of bees," etc., "improperly called a swarm," etc. Webster defines colony thus: "A company or body of people transplanted from their mother country to a remote province or country, remaining subject to the mother country." This definition of the word colony is fully explained in Johnson's cyclopedia. It says: "The settlements of the barbarians who destroyed the Roman Empire were not colonies, for the tribes were not connected with any parent State."

Now, in what one particular does a body of bees which emigrates from a parent hive, and becomes settled in another hive, correspond with these definitions of colony? Not one; unless it be that bees may be called a people. They are certainly under no allegiance to, or protection by, and have no connection with the parent hive or body. The term colony, seems to me, is about as inappropriate a name as could well be applied to them.

Again, he defines "swarm of bees" thus: "Bees issuing from the parent colony for the purpose of increase." 1. Does the purpose for which bees issue from a hive make a swarm of them; or would they be a swarm all the same if they swarmed out for some other reason than increase, as they sometimes do? 2. Webster defines swarm in this way: 1. "A large number of small animals or insects, especially when in motion. 2. Any great number or multitude. 3. A body of bees that emigrate from a hive at once; or a like body of bees united and settled permanently in a hive."

Here then, it seems, is a name that, so far as dictionary-meaning is concerned, is perfectly appropriate for a body of bees which inhabit a hive; and one, too, that has long been in use. There may be reasons why some other term may be more convenient for bee-keepers. The word being used also as a verb may be thought to be liable to confuse; but does not the use of proper articles sufficiently indicate when it is used as a noun? To me, *swarm* seems far preferable to *colony*.

What, then, shall bee-keepers adopt as a convenient and appropriate name for a family of bees? I do not know. Let all bee-keepers suggest until we find the right or best one. If our language does not contain a word more appropriate than colony, then let us make one. As my suggestion, I would say, family; if there is no better. What are the objections to it? and who will offer a better?

I wish we had a truer name for the mother of a family of bees, than "queen." She is no queen in any true sense of that word. She is neither the wife of a king nor the ruler of a people. She is simply the mother-bee, and I wish that were her usual appellation.

Lake City, Minn.

Mr. Boutelle's desire for the word "mother" to supersede the word "queen," is quite reasonable. The mother bee is not a queen; but a difficulty is encountered at the very start, by the fact that two words are needed instead of one. The word "bee" is a necessary adjunct, making the name "mother bee" which is long and rather objectionable on that account. The word "queen" is more elegant as well as more ancient.

But on the use of the words "colony" and "swarm," we beg to differ from him. Personally we do not like the word "family" as a name for an organized body of bees. The "mixing up" which is so often occasioned by using these words interchangeably, is apparent in the necessity of saying the "old swarm," the "new swarm," the "parent swarm," or the "swarm that gave off a swarm," etc. In the foregoing, our correspondent realized the difficulty, and in the 9th line of the 5th paragraph, he used the words "parent hive." The hive is the box containing the bees—was the box the parent or mother of the bees? Such an idea is too absurd for even a passing thought.

We are hopeful that the new "Dictionary of Apiculture," by Prof. Phin, will greatly assist in the use of correct terms by apicultural writers.

◆

☞ We regret to announce that the Rev. L. L. Langstroth is still suffering from his old malady, at his home in Oxford, Ohio. The sympathy of thousands of bee-keepers all over the World are with him in his affliction.

The Season in England.

A correspondent of a London paper gives the following description of the season in England, with reference to the Bee and Honey interests:

So far this year the bees have had a hard struggle to exist. The year opened favorably on them with less mortality than ever I experienced. Large patches of brood were in every hive during January, and breeding was unremittingly carried on throughout the cold winds of that month. Many young bees were flying in February. Flowers and sunshine came with March, and good colonies collected much pollen from the crocuses, willows, tussilago, etc. Many colonies were then advancing rapidly, and were well forward, promising early swarms. April we welcomed, but it brought thunder, snow, and frost of unusual severity—bleak cold weather, with scarcely a ray of sunshine to gladden us. This lasted until May 23. Flowers had almost disappeared; those not destroyed looked sickly, and dead bees strewed on every path. Colonies that looked like swarming seven weeks ago, have made no progress, while many that by this time, with mild weather, would have been strong, are so reduced in bees that they will be unable to do more than keep themselves alive. Our locality is, however, not a sheltered one; there is a paucity of trees in the district, arising through proprietors of small estates cutting down every tree that can be turned into cash, and the ground they occupied made available for cultivation.

◆

Putting Honey on the Market.

In one of our exchanges we notice the following on marketing honey:

Many bee-keepers err in putting their honey upon the market too early in the season and at too low a price. After reading a few encouraging reports in the bee-papers, they fear that there will be a glut in the honey market, and, in their efforts to secure the highest price by rushing their honey into the market before there is a demand for it, they often get the lowest price and help to spoil the market for others. Until the fruit season closes, the demand for honey is light, and bee-keepers should govern themselves accordingly. The honey should be well graded, put up in the most attractive packages possible, well taken care of, and placed on the market when there is a demand at a remunerative price, and not before.

This "advice is good and timely," and we hope will be heeded by the inexperienced, so as not to spoil the market for their more experienced neighbors. The markets are now bare of comb honey, and the demand will be good, and prices fair for the first marketed. Do not rush too much on the early market to spoil it.

CORRESPONDENCE

For the American Bee Journal.

The Bees are Swarming.

ALICE WAVERLEY.

"Hurrah! hurrah!" came the father's voice,
From the onion-bed down by the peas.
"The bees! they are swarming! so hurry out quick;
Hurrah! don't you hear them—the bees?"

"Now, where's my old bucket, and where is my stick,
And what makes ye all so slow?
If ye don't hurry out and rattle them quick,
They'll be off to the woods, I know."

There's a hurry and scamper for bonnets and hats,
A looking for kettles and tins.
Then out we'll all go, and stand in a row,
All ready to rattle them in.

Mother stands under the round apple tree.
The fire-shovel and poker are doing their best;
She must keep well out of the reach of those bees,
Or a swelled face, for days, to their skill would attest.

Father stands under another old tree,
His face well hid in its sheltering leaves;
While he hammers away with bucket and stick—
He's doing his duty in settling the bees.

From the back of the vineyard there comes a faint sound,
Like the tinkling notes of some far away bell,
'Tis only the echo of Maggie's tin pan—
She cannot get stung, I think, very well.

Kit has a milk-pan, wide over and roomy;
But it sends out a very good sound "for a'that."
And should the bees gather too near for good manners,
This pan serves the place of a shield, or a hat.

Fannie goes flitting now here, and now there,
Down through the vineyard, then over the fence;
Through uncle Jim's garden she treads with great care—
If they don't get away, she'll make fifty cents.

"Tum-dum, tum-dum!" goes the stick on the bucket.
This "old oaken bucket" serves for bass in the play.
"Ting-a-ling-ling," goes Fannie's old pendulum now,
As with the wire poker she hammers away.

Well, well! after spending an hour, or so,
In climbing, and jumping and skipping around,
Going backward and forward, then in, and then out—
They're now going to settle, I think, by the sound.

There! now they have lit on a tall apple tree,
And some one must hurry the ladder to get;
And the barrel and board, with the watering-can,
The smoker, the feathers, the hat with the net.

Outside of the fence stand our cousins and neighbors,
For "distance lends charms" when the bees are about.
And no one is anxious to get very near them,
For fear some stray skirmisher might find them out.

"Now Fannie!" calls father from under the tree,
"You take up my grape-hoe and give them a shake.
When I call out *ready*, you just pull away,
And short work we'll out of them make.

"All ready!" a shake, and—"run, Daddy, run!"
For the bees fall on him, instead of the hive;
A moment's confusion, but no one was hurt,
And straight for the branch with the Queen do they dive.

"Ah, sure, we must try some other new plan—
We never can shake them down, I see.
Some one must saw those branches off,
So I'll take the ladder, and climb the tree."

Down came the branches one by one,
Up go the bees as the branches fall.
"Now, if we don't try some other way,
We never can hive these bees at all."

In the midst of our flurry, home comes John—
Runs up the tree—quick as a flash, you know;
Cuts off the branches, and carries them down,
Straight into the hive every bee will now go.

At last they're all in and the racket is over;
And the hive is put down in a row with the rest.
Like the lull after storm, our excitement has ended,
And each one thinks—"*I* was the one who did best."

—*Macomb, Ills.*

For the American Bee Journal.

Winter of 1883-1884.

JAMES HEDDON.

Last autumn I found that my home apiary contained 336 colonies of bees. Most of these colonies had been worked, during the preceding season, upon a plan adopting some new methods destined to bring them out at the close of the season with as little honey and bee-bread in their combs as possible. Though the season closed very much against such a result, still our hearts were gladened to find on an average not half the usual amount of either.

The honey was stored above, and the pollen not at all. To these colonies we fed 11 pounds of granulated sugar made into syrup, which made on an average about 10 pounds to each colony, as about 70 colonies received none at all. The ones which were fed, received on an average of about 12 pounds each. We wintered them out-of-doors, both with and without protection, and about 30 colonies in the cellar. All except about 12 colonies of those out-of-doors were packed.

When all were prepared, I said to the assistants, "Now, for the first time in my life, I hope for a trying winter for bees." Well, in fact, we had such a winter. The confinement was not very long, but the cold weather was quite steady and severe. Judging from 15 years of experience and observation, I should have expected a loss of at least one-half of all my colonies had the usual amount of pollen and honey alone constituted their winter stores. Such, however, were not the condition of the colonies. Even those which were not fed or specially manipulated during the preceding honey season, had less bee-bread than usual; and those which were fed, I think I am safe in saying, had not one-fourth as much bee-bread as the others. I lost about 30 colonies by diarrhœa; but I think none in the cellar had it.

Taking the reports of all, I think statistics show that cellar wintering is the safest method. It is clear to me that when cold is the greater auxiliary to the cause of diarrhœa, bees in cellars come out best; but when confinement is its special aid, then outdoor wintering is ahead.

We prepared 45 colonies without a cell of pollen, and about 25 of them without one drop of honey, while the other 20 had practically none or only a little in the out-corners of an occasional comb. These 45 colonies we fed liberally with the sugar syrup. During the examinations in early spring, the first cover I raised, my assistant exclaimed, "O! what little lean looking things!" We had previously been overhauling a few sick colonies, and many in comparatively good condition; but all whose hives contained mostly natural stores, had distended bodies. Did I say all the 45 wintered well? No, they did not. All were in perfect condition except one, which died—and that died with diarrhœa. As I raised the cover, I said to my foreman who superintended the fall feeding under my directions, "Here is one of our non-pollen colonies dead; and died with diarrhœa as sure as you are born." I lifted a comb from near the centre of the cluster, and up came a little brood and a comb nearly half full of bee-bread. "Why! what is this?" said I. "O! this is my fault, Mr. Heddon," said the foreman. "I remember that in this one hive the queen bred very late in the fall, and this comb had a patch of sealed brood nearly as large as my hand, which I left to hatch out, determined to remove it in a few days, which I forgot to do."

The above are a few of the facts regarding last winter's experiments and the results, as witnessed by myself and my foreman, Mr. William Stolley.

We are so well convinced of the correctness of the pollen theory; *i. e.*, that floating pollen in the honey or bee-bread, or both, if consumed during confinement, is the direct cause of bee-diarrhœa, that we are laying our plans to henceforth prepare our bees for winter in accordance with that theory. As the reader will naturally suppose, after the discovery of certain facts, causing disease, and consequent methods of prevention, comes the best, cheapest and most practical methods of bringing about preventive conditions.

This we are and have been, for the past year, studying and also experimenting upon. That bee-culture of the future, which will not move off readily and practically with a business-like speed, will be forced to succumb to the survival of that which will. We do not propose to dig the bee-bread from the cells with tooth picks; we do not propose to remove it by removing the combs containing it; but we do propose to prevent its being stored in any considerable or dangerous quantity. Again, we do not propose to extract natural stores after the flow of honey has passed; but we do propose to prevent the existence of stored brood-chambers at the end of each year's honey flow.

That it can be done, we have experimented enough to become convinced. The next question in the wintering problem, will be: "Now that I can winter my bees with success, how can I do it with the least capital and labor?" We have ideas which we believe are correct regarding these points, which we shall write upon in the future.

The reason why I have delayed this report is, that I might be able to report the standing of these colonies which could not and did not hatch an egg till they gathered the pollen of 1884; while some other colonies began breeding in February. My foreman and students have examined them carefully, and report that if any difference can be detected between them and the other colonies which began to breed nearly two months earlier, is, that these conservative ones are now the strongest in bees and brood. This is just what I should expect.

I have for several years claimed, against the clamor of our ever-present corps of inexperienced apicultural writers, that "spring dwindling" is "diarrhœa in disguise;" that no apiary would ever suffer from it if the colonies were well wintered. Our opposition accredited it to disagreeable spring weather, cold winds and shady dells. Here they made the same kind of a mistake that they have made regarding the true cause of diarrhœa. Their supposed prime cause are only helpers or secondary causes.

The present spring has been one of the most trying as far as bad weather being a cause of "dwindling; but throughout all the regions where bees wintered well, no "dwindling" has occurred. I have looked upon this wintering-problem without prejudice, and I have little reason to entertain any. I am more fully persuaded that the "pollen theory" is the correct one. I will not take more space to describe the various plans of packing and ventilation used in this apiary during the past winter, as none of them, or the lack of them, prove to be a cause or a prevention of diarrhœa.

The other apiary was not mine till last March. Years ago sugar was found to be a much better winter food than honey. The *reason why* it was such, was not understood. Had it been clearly known, sugar, as a winter food, would not have been discarded; because, in some cases where it was fed, the bees died of diarrhœa by eating the bee-bread from the cells adjoining those containing the syrup.

Dowagiac, Mich., June 9, 1884.

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Read at the Maine State Convention.

The Principles of Protection.

L. F. ABBOTT.

No one need get fidgety; it is not based on the political bearing of tariff protection, as the first thought might naturally suggest. I am a believer in protection, however, in every sense of the word, and especially where the rights of the farmer or the farmer's bees are concerned—the latter of which more directly concerns us at the present time. It is not my purpose to discuss each point exhaustively, but rather to introduce propositions which seem to me to be established as facts, and leave the discussion of the various points to wiser, if not older, heads.

Proposition 1:—The meaning of "protection." Not to be too critical, we will declare it to be, guarding against extremes of temperature both in winter and summer. Protection may be afforded in various ways at both seasons, but all forms may not be equally efficacious in accomplishing the desired end. We may use single-walled hives loosely constructed, for our bees, then leave them out-of-doors through the winter months, placing a few evergreen boughs or corn-stalks around the hives, and call it "protection;" and it would be, but I think not the best kind. We can also use such hives as I have named, and place the bees in a good cellar, and call that "protection;" and this I have often done with good results; but neither of these ways, I am convinced, is the right kind of protection for bees.

Protection then, is something more than guarding against cold; it protects from cold, from humidity, from sudden changes induced by atmospheric influence, and also prevents the production and retention of deleterious gases and other influences incident to non-ventilation.

Proposition 2:—"Why is protection necessary?" Our bees are subject to unnatural conditions in the frame hive. To explain: Bees left to follow their own course seldom fill the hive with uniform straight combs. This change has been brought about by the skill of the apiarist. Bees in a natural state never had wired foundation, running from front to rear of the hive, in beautiful and exact sheets upon which these little insects could continue the work so deftly begun and left by the comb-foundation machine. A hive without bars or frames, occupied by bees, will, as a rule, be filled with combs of many forms, placed irregularly, some running at right angles with others, forming nooks, corners and galleries where the bees can find ample room to cluster in during the winter, and thus find protection from their mode of filling the hives with combs, which instinct leads them to adopt. On the other hand, the higher intelligence of man comes in and directs the work of the bees that now produce perfectly straight and true combs, subject to cold drafts of air from the entrance up through the narrowly spaced frames, and out by the loose joints of illy-constructed hives. Protection, then, is needed to restore the equilibrium destroyed by this abnormal condition to which our bees are subjected by the advances, of what is esteemed, apicultural science.

Proposition 3:—"Protection essential in both out-door and in-door wintering." It is certainly necessary to protect from cold and sudden changes of weather when bees are left out-of-doors, and I hold it is no less the part of wisdom to give nearly the same protection when wintered within doors. In either case, condensation of moisture within the hive will take place—out-of-doors to form frost within the hive, and in-doors to saturate the unpainted walls and frames of the hive and form in drops upon the combs, causing dampness and mold. The colder the hive, the more serious the trouble, in either case. Protection, as with the chaff hive, obviates both difficulties to a certain extent, both by preventing excessive condensation, and again by allowing the moisture to escape, and also by absorption. An example: A colony placed in the cellar, with enameled cloth on the frames with absorbents on top of that, in January were found with moldy combs, the enameled cloth on the side next the frames was covered with drops of water over its whole surface so it dripped when removed, and but little indication of absorption of moisture above the enameled cloth. Another colony placed beside the former, with woolen cloth placed upon frames and bran-sacks above that, was found with the upper story of the hive and the inside of the cover,covered with drops of water, with the packing-material damp, while the quilt was dry and warm. The same state of things would exist in case of out-door wintering, with the exception that frost would collect unless more material was used to absorb the moisture. Protection, then, is needed to preserve an even temperature and a normal condition of dryness within the hive.

Proposition 4: "Bees, to winter safely out-of-doors,should be protected as with the chaff hive, or on the plan of Mr. Additon's shingle hive, or by packing in some manner, if in single-walled hives." If wintered in the cellar, full protection is well; but protection above the bees by some absorbing material, as chaff, finely-cut straw, or cloth, is fully as essential as in out-door wintering.

Proposition 5:—"Protection is the normal condition of bees in the natural state." Bees left to seek their own home, as a rule, seek a hollow tree. There they are in a single-walled hive, it is true, but not a thin-walled hive. But the conditions for disposing of the moisture arising from the bees is generally admirable. The hollow tree, made so by the decaying of its substance, is still subject to the same process of decay, while the bees are snugly ensconced within its dry and warm shelter. The first work of the swarm after domiciled in their new home, is to set up house-keeping by thoroughly clearing their apartment. This they commence to do at the top, but there is always a portion of the upper part of the cavity to which the combs are not attached, and this for the reason that the decayed wood is not easily removed, and still deemed by the bees insecure to fasten their combs to. This partially decayed portion above the combs affords fine absorbing material in winter, being as dry as powder in the fall when going into winter quarters, and in spring, wet with the condensed moisture absorbed during the cold weather. Such being the natural conditions, our artificial devices should be as adequate and as much better as possible; hence protection is a necessity, to a certain extent, under all circumstances, in supplying natural conditions.

Proposition 6:—"Protection is needed in summer to guard against excessive heat." There is no doubt in my mind but that many times bees refrain from entering the surplus boxes, and cluster upon the outside of the hive, solely from the effects of the excessive heat within the upper portion of the hive. This I saw demonstrated last season, and have seen frequent cases before. An empty space above the section-case in the upper story of the hive, affords some relief; but I think some non-conducting material above the bees, immediately above the sections when they are on, or over the frames in spring and early summer, quite essential.

For the American Bee Journal.

Introducing Virgin Queens.

G. M. DOOLITTLE.

Formerly it was considered that virgin queens could not be introduced, to any advantage; and from this reason a queen-cell was always given to a queenless colony, unless a laying queen was at hand. In case no queen-cell was ready for use, brood was given to the queenless colony or nucleus, from which they would rear a queen. As it takes them from 12 to 16 days to rear a queen from this brood, a gain was made by having queen-cells constantly on hand, with which to supply the nuclei.

As a queen-cell was liable to be destroyed if given to a nucleus or colony as soon as the laying queen was removed, it was found best to wait 48 hours before giving such a cell; and as the cell would not always be ready to hatch as soon as given, the time elapsing before it would hatch, would, on an average, be about 2 days more; so that a gain of only about 8 to 10 days was all we would get by using the cells instead of the brood. Some tell us of inserting the queen-cells as soon as a laying queen is removed; but the fact that many of our best apiculturists entirely fail with that method, proves that such a procedure is very uncertain, to say the least.

After the young queen emerges from her cell, the average time before she commences to lay is about 10 days; so the colony must be without a laying queen 14 days when a cell is used in re-queening; or from 22 to 24 days where brood is used. As 24 days represent about so many 1,000 bees with a laying queen in the hive, it will be seen that the old way of giving brood is decidedly "too slow," and that of the cell-plan much too slow. For this reason it became a desirable object, especially to the queen-breeder to introduce a virgin queen as soon as a laying one is taken from the nucleus; thus making a gain of time to the breeder, and also keeping the nucleus constantly supplied with brood. With this desirable object in view, many plans were tried, and as a result it was soon heralded in the bee-publications, that if virgin queens could be given as soon as they were hatched from the cell, they would be accepted, as a rule, wherever put, if there was no queen in the hive; some asserting that they had no trouble in putting them in at the same time they took the laying queen out.

After trying the plan (all others being given up to within about two years ago, and after losing 19 out of every 20 queens so tried), I became discouraged, and went back to the cell-plan. Some of those I did get to laying, would be so crippled by the bees hugging them, that they would be of little use; and soon had to be killed on account of their legs being paralyzed so that they would fall off the combs, or otherwise being incapable of being a good queen.

About this time I had a lot of very nice cells reared by natural swarming, on which I "lotted" very much for choice queens. The day before these cells were ready to be removed from the hive, a second swarm issued from a colony on the opposite side of the apiary. As I was about to secure the cluster and return it to the old hive, I happened to see the queen which was a very nice one; and being short of queens, I thought I would cut off a part of the cluster with the queen, and put them in a nucleus hive, thus securing a valuable queen, as I had reason to think there were two queens with the swarm. Having secured the queen and about a pint of bees in my swarming basket, I returned the rest of the swarm.

After they were all in the hive, I prepared the nucleus hive and placed the pint of bees in front of it. As they were entering, the young queen took wing, and fearing she might return to the old hive, I placed a sheet over it. Soon after, the bees were all in the nucleus hive; they commenced running all over it, thus showing that they were queenless. So I got a frame of unsealed brood and gave it to them to keep them from going back, supposing that the young queen had gotten back to the old hive before I covered them with the sheet. By keeping these bees I would have a good nucleus for my queen-cells, I thought, as I had more cells than nuclei to receive them. The next day as I went to get the nice lot of cells, you can imagine my surprise and chagrin when I found them all destroyed. After a little examination, I soon discovered the very same queen which had flown away from my little swarm of bees the day before.

After pocketing the loss of 25 as nice queen-cells as I ever saw, I began thinking how it was that after trying for years to introduce virgin queens, and failing, that this one should be received. The only solution I could make of it was, that these bees had been queenless so long that they expected their cells to hatch, and so they took this queen as one hatched from their own cells.

From this I went to experimenting till I ascertained that 9 out of every 10 virgin queens would be accepted if placed into a colony after the first queen-cells were sealed; while 9 out of 10 would be killed if given to the colony before the bees had sealed the cells. I also found, as a rule, that the first queen-cells would be sealed five days after the nucleus was made queenless; and from this knowledge I was enabled to introduce virgin queens with little risk of having them killed.

It will be noted that if I should give a colony a queen which had just emerged from the cell at this time, that I was one day behind the time gained by the cell-method; but if the queen given was 7 or 8 days old, she would be laying in 2 or 3 days now, which would give me a gain of a week, over the cells. Accordingly I made a queen nursery, after the directions given in Alley's book, in which the cells were placed to hatch; and the young queens kept there until old enough to be used to the best advantage. When old enough, and the nucleus was in the right condition, these queens were taken from the nursery, then daubed with honey and dropped on top of the frames of the hive. The next day the queen-cells would be destroyed, and in 2 or 3 days more the queen would be laying.

As I said before, this would work about nine times out of ten. This season I experimented farther, not being satisfied with losing one out of ten; and instead of waiting five days before giving the virgin queen to the colony, I placed her in a provisioned, wire-cloth queen-cage; and when she was 4 or 5 days old, I placed the cage over the cluster of a colony after it had been queenless but two days. She was then left for 3 days, when, upon opening the cage, she was allowed to run down among the bees.

In this way I have succeeded every time. I have opened the hive within ten minutes after releasing the queen, and found her on the queen-cells busily engaged in tearing them open. I now feel that I can introduce virgin queens successfully; and in the foregoing I have told the reader how I do it.

Borodino, N. Y.

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For the American Bee Journal.

Building up Colonies in the Spring.

JAMES M'NEIL.

I desire to give the result of an experiment made in building up colonies in the spring. Mr. Doolittle says: "Beginning about May 1, shift the frames of brood and put the frames of honey or syrup in the centre of the brood-nest every week for the following six weeks." Mr. Heddon says: "Do not manipulate the frames at all. The bees will extend their brood-nest as fast as it is desirable." When such notable authorities in the apicultural world disagree, the novice must hold the weight of opinion in an even balance until he shall have experimented for himself. This I have done, and I throw the weight of my authority, whatever it may be, into the Doolittle scale. I selected 20 colonies, estimated very carefully the amount of brood in each, and then divided them into two equal lots; I ran one lot on the non-stimulating plan of Mr. Heddon, and the other lot on the brood-spreading-and-stimulating plan of Mr. Doolittle.

My observations were made at two different times, May 10 and June 2. Between these dates, 3 weeks and 1 day, the colonies run on the Heddon plan made an average gain of 1¾ frames of brood; those run on the Doolittle plan, 2 13-20 frames. Had the experiment covered the period of 6 weeks, the contrast would, of course, have been greater. I keep my bees in their winter packing till the middle of May, which allows them to spread brood, with less risk, before settled warm weather is assured.

Mr. Doolittle, in his directions, makes no account of fruit bloom. Perhaps he does not live in a fruit-growing region. In this section, stimulative feeding is unnecessary from about May 8 till the 26. By implicitly following Mr. Doolittle's directions, I had my bees swarming during fruit bloom last year; and frames partly filled with honey, placed in the centre of the brood-nest, were completely filled from the abundant flow of cherry bloom.

This year, in the beginning of apple bloom, I put upper stories on the hives containing the strongest colonies: and they stored in them, on an average, from 20 to 25 pounds of honey. I have never seen a more abundant apple bloom; and for 4 days the weather was delightful, so that the bees could work from daylight till dark. The general June honey-flow began in good earnest to-day.

Hudson, N. Y., June 7, 1884.

For the American Bee Journal.

Wintering—Bee-Diarrhœa.

WARREN PIERCE.

As the above subjects are still being discussed, I wish to offer a theory, for the consideration of the bee-keeping fraternity, based, principally, upon the ventilation-theory to which I called attention in the Bee Journal several years ago, but which is only just now becoming popular.

It is a well-known fact that carbonic-acid gas is extremely poisonous; but it is not as generally known that it is heavier than air, and may be poured from one vessel into another almost as readily as water, and evaporates very slowly. In the case of a colony of bees confined to a close hive, it is a case of slow poisoning, which, if not too long continued, is readily cured by a flight, and not so much by the voiding of feces as by the purifying effects of the air. But if no opportunity for flight occurs, and the gas is not permitted to escape, the poisoning continues until the result is fatal.

Diarrhœa is frequently attributed to late-gathered honey. I am aware that in some localities poisonous honey is gathered, but I think it a mistake to charge it with as much mischief, as many are doing, for want of a better reason for the disease.

In June 1881, I gave my views, through the Bee Journal, on ventilation; and in that article I mentioned the case of two colonies in my bee-yard where one had nothing but the best white clover honey, and the other only late-gathered honey. The colony having the best honey died of a bad case of diarrhœa, while the other came out bright and clean. Both were on the summer stands. The one which lived had been carelessly left with the back-stop of the hive out, thus leaving an opening ⅜ by 14 inches to the west.

Now, what are the evidences that carbonic-acid gas is the greatest enemy to successful wintering? That a colony of 30,000 or 40,000 bees must produce it in large quantities cannot be doubted; and if it does not pass away freely, it must act as a slow poison. We have the testimony of bee-keepers who are successful by reason of giving large bottom-ventilation which allows the gas to pass off freely; the testimony of those depending upon top-ventilation which admits pure air to the cluster and assists in driving out impure air below: the claims of those who use deep hives on account of better wintering qualities, giving as they do, more room below the cluster for the dense gas to settle; the well-known superiority of the old box-hive, on account of its depth, frequently combined with unlimited bottom-ventilation; the bee-tree, the cavity of which usually has the form necessary to safety; and lastly, perhaps, by the fact that brief confinement in any weather will produce an effect similar in appearance to diarrhœa. I have no faith whatever in the "pollen theory;" none in the "moisture difficulty" which cannot be remedied by proper ventilation: and but very little in the "poor honey theory."

I believe that ample protection is necessary, if wintered on the summer stands, and would either have a two-story hive with the cluster in the upper one, or a large opening in the bottom-board, and a box without a cover for a stand. If bees are wintered in the cellar, the bottom-board of the hive should have a large opening, or be removed entirely, and wire cloth substituted.

The hives should be placed as far up from the cellar-bottom as possible, especially if the number of colonies is large, for the same reason that I would use a two-story hive. A recent number of the Bee Journal gives the experience of one of its correspondents who found that the bees which were the nearest to the cellar-bottom, were the *most* diseased, and those which were nearest the top of the cellar, were the *least* diseased.

Garrettsville, O.

For the American Bee Journal.

Wintering Bees in Cellars.

IRA BARBER.

I notice on page 356, that Mr. Doolittle has met with heavy losses of bees, on a new plan of wintering. My sympathy is with the dead bees, and not for Mr. Doolittle; for, in my opinion, any man who originates a plan of wintering bees, and fails to make a success of it, should not try to make it appear that his plan was substancially the same as the one practiced by me for more than 20 years without a failure.

He used a cold cellar built in a side-hill, and depended on coal-oil to furnish heat; while the plan which I have practiced, requires a warm cellar under a dwelling-house, and one which never froze when bees were not in it.

Mr. D. says that he found, by my reply to his letter, that I knew but little about the matter, as I used a thermometer only when the bees were put in and when they were taken out; and at such times the bees were agitated, and would raise the temperature. The tests of degrees of heat given were 12° above zero, outside, and 65° inside, 24 hours after the room was closed; and that of 60° outside and 90° inside were taken before a colony was carried out, and when the cellar was first opened. I should make tests oftener if I lived where the cellar is; but as my home is 20 miles from it, I did not propose to ride that distance, on extreme cold days, to test the degree of heat the bees were keeping up. He says that the mercury might fall to 40° below zero and stay there the most of the winter and I not know it. I am not located near enough to the north pole to have the mercury remain at 40° below zero nearly all winter: while the fact is, the mercury seldom, if ever goes so low in the coldest places in the open air; and that for only a few hours at a time.

Does Mr. Doolittle, or any intelligent bee-keeper, believe that a frost-proof cellar without bees would be in any danger of getting too cool for safety when filled with bees? The same week that I received Mr. D.'s letter, several other parties wrote to me asking the same questions that Mr. D. did; but this case is the first that I have heard of coal-oil being used to generate heat sufficiently to warm bees.

Mr. D. says that on Jan. 1 his bees were all right; but was surprised to find them active. What would he have done if he had seen my bees on March 24, when no part of the hives could be seen; for all that could be seen was piles of bees 5 feet high, or rather, walls of bees; for they were all from top to bottom and lengthwise of the rows of hives. All the damage done to them was the mixing up of Italians and hybrids, and they never saw a day, while in winter quarters, that the mercury was as low as 50° above zero.

Again, he says that the bees were 2 inches deep on the cellar-bottom on March 1. I fill the cellar full of hives, on my plan, and there is no cellar-bottom left to be covered with dead bees; and if any get tired of staying at home, they can step in to the next door neighbor and be received as a welcome guest.

He says that bees died of old age in winter quarters. What can he offer as proof of the assertion? In my experience in examining dead bees found in winter repositories, I have never seen any evidence of old age among the dead. The down or hair on their bodies was as bright and fresh as we find it on bees 3 or 4 weeks old; and the wings were in perfect shape, showing plainly that they had not been used to any extent. Bees in this locality often cease breeding quite early in August, and winter just as well as when breeding is kept up until Oct. 1.

Mr. D. asks if there is any conditions in nature, unaided by man, which will confine bees for several months in so high a temperature that moths will mature. My answer is: A warm cellar well filled with colonies of bees, will naturally furnish all the heat required to mature the moth larvæ to the perfect miller, right on the outside of the hives; and the bees will come out in fine condition.

DeKalb Junction, N.Y., June 9, 1884.

For the American Bee Journal.

Docility of Syrian Bees.

R. J. KENDALL.

On page 362, Mr. Hewitt, of Sheffield, England, takes exception to my remarks on page 108, regarding a communication of his in the *British Bee Journal* of Jan. 15, relating to the docility of Syrian bees.

I am sorry if I misunderstood and misconstrued what he said; but the two articles are before the public, and I shall not discuss them further. Any one can see for himself how far I went wrong. I am glad, however, of Mr. H.'s letter, because it exactly agrees with my ideas; for in sum and substance it really amounts to saying that Syrians are no more docile than Italians, when you get down to bed-rock.

In Mr. H.'s complaint as to the wrong use of the word "Briton," I think he is also striking at me, not at the Editor, as he (the "Ed.") seems to think. I designated Mr. H. as a "Briton;" the Editor merely used the word "British." The difference between the two may be the difference between tweedle-dum and tweedle-dee. It is not very important, but Mr. H. thinks it enough to lecture one of us on, and at the same time to show that we, on this side of the Atlantic, are ignorant (?) of national derivatives. I have frequently noticed in the *British Bee Journal* this tendency to exhibit a depth of pedantic knowledge of no practical use.

But now in regard to these words, "Briton" and "British." In their original and earlier sense the words were used, doubtless, to designate the semi-barbarous race of people who inhabited "the tight little Isle" prior to the Saxon conquest; but in their later and common acceptation, it is equally sure that they are used to designate the natives of Great Britain—and this latter acceptation is equally as valid as the former. Mr. H. must remember that it is not Americans who gave the name of "Briton" to Englishmen, but Englishmen themselves.

I want to ask Mr. H. a question or two: Between you, me, and the Wicker, will you tell me how many times after, or at, a Good Friday excursion to Conisbro Castle, a Whit Monday trip to Roche Abbey, a picnic in Norfolk Park, a run-over to see "'t Leger" on Doncaster Town Moor; or a political meeting in the old Pot Market, or the Albert Hall, have you expanded your lungs by affirming with great vehemence that "Britons never, *never*, NEVER shall be slaves," "Britons' Strike Home," and like patriotic songs about "Britons?" When you sang those songs, who were the "Britons" referred to—the dead-and-gone, before-the-Saxon-conquest braves, or yourself and countrymen now living?

If you will take your Nuttall's Dictionary, I think you will find that it says, a "Briton" is a native of Great Britain," as, of course, he is; and any English school-boy will give such an answer every time. The English papers claim to be, and are included in "The British Press." Are they not eternally telling us about "British Interests in India," and other parts of the world? Do we not read, every little while, of the "British Troops" doing this and that? Have we not read, or heard of "The British Soldier" and "The British Tar?" and even to-day there are lots of schools in England called "British Schools." Why, their second national song is called, "Rule Brittannia;" and next to "God Save the Queen," this song is the dearest to the hearts of Englishmen.

I would recall to Mr. Hewitt's remembrance that well-known song, "The Englishman"—note the title, "The Englishman." The first line of one verse begins:

> "The *Briton* may travel from the pole to the zone, etc."

and the verse ends:

> "'Tis a glorious charter, deny it who can,
> That breathes in the words, I'm an Englishman."

What becomes of Mr. Hewitt's assertion that the word "Briton" cannot properly be applied to an Englishman? Again, it is news to me to hear that either the natives of "Cyprus, Canada, Hong Kong, India, Jamaica, etc.,—in fact people of all colors—are Britishers." The direct contrary is true; they are *not* Britishers. There may be people living there who are Britishers, but they were born in the British Isles or of British parents if they are. If Mr. Hewitt's bee-ology is no better than his ethnology, I am afraid we cannot depend upon it.

Austin, Texas.

For the American Bee Journal.

Prevention of Bee-Diarrhœa.

J. E. POND, JR.

On page 374 Mr. Fradenburg says: "I have read with much interest the articles on bee-diarrhœa. But all have been theories and no proofs." "Now," he says, "I will give the proofs first and the theories afterwards;" and then states further: "My proofs are sustained by 59 living witnesses." But what do his proofs prove after all? Certainly not that pollen is the cause of bee-diarrhœa, but simply that in the cases he mentions, no diarrhœa was found when sugar syrup was used for winter stores.

Per contra, I will give some proofs; true, I have but 9 living witnesses, but they will certainly give one-sixth as much proof as Mr. F.'s 59. Last fall, when preparing 9 colonies for winter, I allowed all the pollen left over to remain in the hives; the result was, that not one of these colonies showed a sign of diarrhœa, and I never saw bees in better condition, or recruit up faster than these 9 colonies did, this spring. One of them, in fact, gave me 72 pounds of surplus honey from apple bloom, gathered in five days.

This proves nothing in itself, but it certainly is as strong proof as that given by Mr. F. If, however, it does prove anything, it goes far toward proving that pollen is not the cause of bee-diarrhœa; for if it is, my 9 colonies would have been affected with that disease.

The fact is, we must all of us look further yet, for the cause; when found, there will be a general rejoicing all through the land.

I am satisfied that I have found the solution of the wintering problem, and in a future article, will give my ideas. For the present I hope that every bee-keeper will do his part toward ascertaining the cause of bee-diarrhœa, and he who first discovers it, will receive the heartfelt thanks of his grateful brethren.

Foxboro, Mass.

For the American Bee Journal.

Profitable Use of Comb Foundation.

W. H. STEWART.

Although I have kept bees nearly every season for the last 40 years, and have all the while striven to learn all that I could of their nature, wants and habits; yet, after becoming somewhat acquainted with the many good lessons on modern bee culture, as given in the bee-papers by Mr. G. M. Doolittle, I feel that he is capable of teaching me very much which I have not yet learned. And, notwithstanding his superior judgment and keen powers of observation, I must say that I am quite sure that the doctrine (or a portion of it) taught in his article on pages 671 and 672 of the BEE JOURNAL for 1883, is unsound.

Though Mr. D. seems to express the wish that the article above mentioned should be allowed to pass without criticism, when he says, "If any think that it is not the right way to work, they can pass this article by, the same as if it had not been written;" yet I propose to review the article in part.

The first mistake which I notice in Mr. D.'s remarks is, "Many cannot afford to buy it (foundation)." I hold that no person can afford to keep bees at the present stage of the art without buying or making all the best improved appliances which have been discovered, and put them into profitable use. We might as well conclude that some persons who keep horses could not "afford to buy" oats or corn for feed. I cannot conceive of any reason why a bee-keeper could not "afford to buy" foundation, unless it is because he is poor; and if poverty be offered as an excuse, I would reply that no poor bee-keeper can afford to put up with a small yield of honey, when he could in any proper way get a larger yield, and at a less cost than the market value of the honey.

One of the most happy facts connected with bee-keeping is, that those having but limited means and only a small patch of ground, may engage in the pursuit on a small scale, and by proper management, obtain good returns in proportion to the outlay. Yet another fact, and not so "happy" a one is, that those who engage in the business, and neglect the bees in their wants, are very sure to lose all the time and money which they invest.

Mr. D. states that in order to secure straight combs in the brood frames, he has "found a guide of some kind an absolute necessity." And, although he recommends the plain strip of wax "on the under side of the top-bar of the frame . . . . as being the best," yet he admits that his choice of a guide is a practical failure; for he states in the very next sentence that he has "found that no guide can always be depended upon, as the bees are sometimes very obstinate, and will leave the guide so as to build crooked combs, if they do not go directly across the frames.

Mr. D. starts out in his article by stating a truth; viz: "To have all our combs built true, in the frames, so that each comb is as true as a board, *is certainly worth working for*;" (the italics are mine) and now, as he admits that his kind of a comb-guide is sometimes a failure, he has virtually admitted that it will pay to try some other; and he cannot claim that he has thoroughly tested good sheets of foundation; for he says, "I have never used 10 pounds of foundation in brood frames since I have kept bees." It seems rather strange that Mr. D. should assume to set himself in judgment against an article so highly recommended and so universally used as is comb foundation; and then with the same dash of his pen, write that he had never used 10 pounds of it; which is virtually admitting that his opinion in regard to the matter, is of no practical value whatever.

Prof. A. J. Cook, in his "Bee-Keepers' Guide," page 208, in speaking of the usefulness of comb foundation, says: "The most promising use of foundation, to which there can be no objection, is in the brood-chamber. It is astonishing to see how rapidly the bees will extend the cells, and how readily the queen will stock them with eggs if of the right size, 5 cells to the inch. . . . . The advantage of foundation is, first, to insure worker comb, and thus worker-brood; and second, to furnish wax so that the bees may be free to gather honey." Mr. D. thinks we "cannot afford to" do this.

"Prof. Cook also says: "We proved in our apiary the past two seasons, that by the use of foundation, and a little care in pruning out the drone-comb, we could limit, or even exclude drones from our hives." Mr. D. says that all colonies having straight worker combs will be "profitable." I have owned several foundation mills, and have made several different kinds myself; and have used much of different kinds of foundation for several years. I have tried the experiment thoroughly with 100 colonies, which Mr. D. recommends in his closing remarks, and from actual and thorough experiment, I do know that it would pay me to purchase foundation at $2 per pound rather than to do without it.

Again, Mr. D. says that he hives his swarms on 9 frames (Gallup frames of course, as he uses that kind), and in 2 days he opens the hive and finds that the bees have made a start in 5 frames. Why! Mr. D., a good, new colony of bees and only "a start" in 5 frames in two days? If you will come to see me work, this season, I will show you that such swarms as I put on 10 frames, each nearly full of foundation, will, in 2 days, have all of them ⅔ finished, and 5 of them complete.

Again, let me suppose that the weather is such that you cannot go through those new colonies until the fifth or sixth day, and then if you find that the colony had turned out to be one of that "obstinate" kind which cuts down the guides and builds the combs across the frames,—how much would you lose in the operation? Do you not think that in that case it would have been good economy to have put the swarm on frames well provided with foundation?

A wise and careful bee-keeper would not be apt to so manage as to lose from 2 to 6 days' work of a new colony in the time of a good honey flow; and that is just the time that swarms are cast. I have often put swarms on 10 frames as nearly full of foundation as the bees could work them to advantage, and in examining them 6 days afterward, I found every frame full of comb, every comb complete, and but a few cells that did not contain either brood, eggs, or honey. Let me say, also, that in all which I have used foundation, I have never known a colony of bees to build combs in a different direction than that in which the foundation was put in for them. It is true that if the sheets of foundation are so placed in the hive that the distance between them is too great, then the bees will be very likely to build thin sheets of comb between them. It is also true that some kinds of foundation, if put in nearly large enough to fill the frame, will, many times, sag and warp while the bees are working them out. Mr. D. says: "It pays the apiarist to look at each colony hived on empty frames, while they are building combs, as often as once in three days. If any combs are found going wrong, they can be bent back in line very easily." I would like to have Mr. D. tell us whether a comb a little out of a true plane built on comb foundation, is not as "easily" straightened as is one built after one of his favorite comb-guides?

I have had several thousand combs built on foundation, and I do not now remember that I ever found one, when finished, so badly warped as to spoil it; and I have never examined a colony for the purpose of straightening the combs; I pay no attention to that work until I have the combs out for some other purpose.

Mr. D. says that until he is better satisfied that comb foundation pays, than he has been from past experiments, he expects to build all his combs in the future, after the plan which he has given. I would like to ask Mr. D. how he expects to become better satisfied that comb foundation pays while he refuses or neglects to give it a full and fair trial?

Mr. D. states that he would like to have all the "advocates of foundation" try an experiment, as given in his closing remarks, and see which of the two colonies comes out ahead. I would like to have Mr. D. try 2 or 3 swarms hived on a full set of Gallup frames, half of those frames furnished with 2 sheets each of foundation, and each sheet 2¾ inches wide and 3 inches deep. This would leave a little open space between the sheets in the centre, and also between their outer edges and the end-bars (these sheets, 6 square feet to the pound, will give good results). Furnish the other half of the frames with his simple wax-guides, and hang those furnished with foundation in one end of the hive, and the empty frames in the other; then open the hive every day until all the combs are complete, and see which progresses the fastest from first to last, and also where the most eggs are deposited from first to last.

Try another swarm on like furnished frames, hanging those with and those without foundation alternately through the hive, and then examine them daily as above. Notice in the latter also, whether he does not succeed as well in securing straight combs, and in the right direction, in his empty frames as he would if he had hung them between full combs. And finally, will Mr. D. tell us how large young-swarms he gets down there in Borodino? I would laugh to see him crowd a good colony of bees up to the capacity of 5 Gallup frames after being hive 2 days here in Wisconsin.

Orion, Wis.

* * *

For the American Bee Journal.

Overstocking a Locality.

W. F. KANZLER.

1. All persons have the right to keep bees on their own premises.
2. If a man has an aversion to bees and bee-stings, he will not keep bees.
3. Any man who likes bees and their handling, will keep as many colonies as he can profitably care for.
4. No man knows overstocking by his own experience—concerning the number of colonies: for if he keeps a certain number of colonies, he, at the same time and place cannot keep a lesser or higher number. For instance: If he keeps 20 colonies, he cannot keep 5, 100, 200 or 300 colonies at the same time in his yard; neither can he know what these 5, 100, 200 or 300 would yield in the same season; but he knows only the yield of his 20 colonies.
5. Therefore, if we cannot prove overstocking, by our own experience, we can only speak of it by guessing at it—it is nothing but guess-work, or an imaginary evil.
6. In a good season my bees will produce as good an average as my neighbor's; *i. e.*, provided we both have the same skill, hives and strains of bees, regardless of the number of colonies.

7. In a poor season, when bees do not gather enough honey for winter, I must feed my colonies, and my neighbor must do the same thing or kill his bees; and my yard is overstocked if I have only one colony.

8. Therefore, my neighbor cannot lower my average in honey, but the season can.

9. The expression, "bees can graze a field," is wrong; for bees have no teeth like a sheep or cow, and cannot eat the whole plant at once, but they will only sip the sweets out of the blossoms and other parts of the plants; while those plants grazed off by animals, require several days, and perhaps weeks, to give another nourishment. Therefore, we can overstock a a clover field with sheep or cows, but not with bees.

Fulda, Ind.

SELECTIONS FROM OUR LETTER BOX

Bees are Busy.

The colonies which were wintered in a dry and well ventilated cellar, in this locality, came out strong in bees in the spring. I have 100 colonies, and had the first swarm of this season on May 27. There is plenty of white clover, and the bees are busy.

DAVID ROWE.

Lime Ridge, Wis., June 16, 1884.

Increased Experience.

I wintered 110 colonies on the summer stands without loss. In the spring I found 2 of which were weak, and I doubled them up. I lost one by robbing. Bees are doing well, and have stored some very nice section honey. Financially, I am ahead on last season's crop, and also have added some experience.

JAS. MCCONNELL.

Clay Village, Ky., June 12, 1884.

Use of Comb Foundation.

When I wrote to the woman spoken of in my last article, I told her not to be ashamed of her ignorance, but to live up to all the light she had, and more would come to her. I told her that comb foundation is made of beeswax; that a few enthusiasts thought they could make it of paraffine, but it all melted down in a heap, and they did not try it again; also, that it is made on a little machine something like a clothes wringer; and that it is good to use in bee-hives for the following reasons: 1. It saves wax, as bees are said to consume from 16 to 20 pounds of honey in making a pound of comb. If the comb foundation is furnished them ready for use, it saves them a lot of honey and a great deal of time. 2. It enables one to have all worker-comb in the hive. 3. It compels the bees to build straight combs. I told her that I thought the Italians are the best race of bees out; and that the only moth-trap in the world, is a strong colony, and that they would attend to the moths. I informed her that the honey-board was formerly used directly over the brood-nest; that it is an article made of wood; and that it is now superseded by a piece of Indian-head muslin the size of the hive, and laid on next to the bees. I told her that the very first thing for her to do is to get movable-frame hives and put her bees into them, so that she could see what they were doing at all times.

MAHALA B. CHADDOCK.

Vermont, Ill.

North, East, West and South.

The BEE JOURNAL does its advertising wonderfully well. It brought to me responses from Canada to the Gulf of Mexico, and from the Alleghanies to the Rocky Mountains.

WM. M. ROGERS.

Shelbyville, Ky., June 12, 1884.

Swarm Separators.

In making a swarm separator, as described by Mr. Secor, on page 380, do the division-boards extend to the bottom-board, and as near to the top-board as the frames; viz: $\frac{3}{8}$ of an inch? If not, how will bees separate if the separator fills the hive flush on all sides? I wintered my bees in a cellar, and they all were strong quite early this spring. Fruit bloom is abundant. I took 75 pounds of honey from 3 colonies—25 pounds each—last week. As yet, I have had no swarms, and I do not want any before June 20. There are about 120 colonies within a radius of a mile here. Will we soon be overstocked?

T. F. KINSEL.

Shiloh, O., June 16, 1884.

[Will Mr. Secor please reply to the above? There is not much danger of overstocking the radius of a mile with 120 colonies.—ED.]

Heavy Bloom.

We are having a fine honey flow, and have had a heavy bloom of locust and tulip. Now we have white clover in abundance. On yesterday morning the leaves of the grape vines, chestnut and oak trees was fairly glistening with honey-dew.

W. E. STATHERS, M. D.

Middlebourne, W. Va., June 11, 1884.

What do we Know?

I have been studying bee-lore for 15 years. I have formed theories, planned hives, frames and sections, and have built for my own use a good circular saw. I have made my own hives, etc., etc., and yet I find that I am absolutely an old-fashioned know-nothing. I have read Mr. Root's and Prof. Cook's bee-books, and the BEE JOURNAL; and I find that all of these authorities are at sword's points, and that all the correspondents of the bee-papers are as opposite in their opinions and practices as it is possible to be. I have looked in vain for some one person whom I could follow with a certainty of success, and as freely as I would a teacher of any of the common branches of human knowledge. I have learned one thing of which I am certain; *i. e.*, that bees will sting; though I do not think I have learned that as thoroughly as some others have. I wish that some one would brimstone all these quarrelsome writers, editors, novices, etc., etc., and let the "fittest survive" to teach the "young idea how to shoot." Stop quarreling, write sense, and the common sort at that, and the moment any writer cracks up any hive, which is not as simple as a hollow tree, charge him 5 dollars a line for inserting his valuable foolishness.

S. RUFUS MASON.

Purple Cave, Neb., June 10, 1884.

Unripe Extracted Honey.

The BEE JOURNAL for 1883 says: "The sale of extracted honey is dull on account of too much unripe honey on the market." In the first place, who puts this unripe honey on the market? It must be beginners or some who are trying to spoil the sale of extracted honey, or trying to see how much honey can be produced by one colony of bees. When the combs are sealed $\frac{1}{3}$ of the way down, they are ready for the extractor, and no sooner. My bees came through the spring in fine condition. I have had 6 swarms, and my hives are full of honey and bees. I have the Syrians, and I believe that in 5 years' time they will stand at the head of all races of bees. I hived a swarm 8 days ago, and they have their 8-frame Langstroth hive full of combs and brood; and there is no comb foundation in the hive either. Colonies which have not swarmed, have their combs sealed fully $\frac{1}{3}$ of the way down. The temperature at which I keep my cellar for wintering bees, is 36° to 45°.

FAYETTE LEE.

Cokato, Minn., June 7, 1884.

Queen Rearing.

I bred, last year, from fine young queens reared last year, young queens which almost all proved fidgety little queens, and very shy. Their workers died to a great extent, during the winter, and the colonies fizzled out this spring. I have reared, this season, of the same queens, the finest queens I ever saw, and the most prolific ones, and I have come to the conclusion that it is as poor policy to rear young queens of queens reared the same season. I wish, through the medium of the BEE JOURNAL, to hear the opinions of the bee-keepers who are not queen-breeders, as to their experience and opinion in this matter. If my opinion is correct, queen-breeding from a young queen reared the same season, would be as bad a policy as in-and-in breeding, and perhaps worse, and to ascertain this fact would be of importance to apiculture.

GUST. MURHARD.

Portland, Oreg.

☞ The Southwestern Iowa Bee-Keepers' Association, will meet in Corning, June 28, 1884.

W. J. OLIVER, *Sec.*

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Transferring Bees.

1. How can I transfer bees from the box-hive to movable frames?

2. When is the best time, with a view to increasing the number of colonies? J. F. McMillan.

Strawn, Ill., June 5, 1884.

Answers.—1. By the method given on page 367 of the Bee Journal for 1883; a repetition of which would be too long for this department.

2. For either purpose I should prefer the time just before or just at the commencement of swarming.

Prevention of Swarming.

I stored 19 colonies in the cellar last December, and took them out on March 10. One late swarm starved, but the rest were strong in numbers, and had used but little honey. Some colonies show signs of swarming. I do not want more than one swarm from each colony. Where will the queen-cells be most likely to be built? I shall have to find and destroy them to prevent after-swarms.

G. C. Bill.

Plainfield, Ill., June 9, 1884.

Answer.—I do not like your plan of prevention of increase. See page 126 of the Bee Journal for 1883. You will be obliged to *carefully* scan every portion of all the combs in the hive.

Reversing the Frames.

Speaking of reversible frames, the question is often asked, "How about the cells, which have an upward inclination, and when reversed, will pitch downward, will the bees change this, or is it not necessary for brood-rearing? C. G. Beitel.

Easton, Pa.

Answer.—I do not consider any change in the pitch of the cell necessary. On page 392 Mr. Baldridge speaks of this. Here we have had eggs, larvæ and pupæ in a perfect state of development, in combs laying flat on their sides. It seems that Mr. Baldridge has had the same experience regarding vertical cells. We find that bees invariably (without guides) build their cells horizontally, and never vertically. We also find that when we give them foundation with vertical rows, no injury or drawback is realized. The Dadant foundation is made in that way, I believe. Many think that we must follow the "wisdom of nature;" but if we do that, we will find the greatest portion of such wisdom in the brain of man, and by crossing lower instincts in accordance with reason, is the great and useful work of science.

Chickens and Bees.

One of my neighbors had a brood of chickens that were in the habit of frequenting the shed in which he kept his bees. The bees stung all the dark-colored ones to death and did not molest the light-colored ones. Why this preference? I am well pleased with my success. My bees have wintered on the summer stands.

Pioneer, O. John Dye.

Answer.—Several times, through the Bee Journal, I have spoken of the advantage of wearing light clothes among the bees. We wear black bee-veils because we cannot see clearly through any other color. Wooly, fuzzy and dark materials are objected to by bees. A man with a plug hat on rarely gets stung, unless by a bee that in trying to "shoot the hat," aims too low, and hits the face by mistake, while a companion at a suitable distance is perfectly safe.

Very Small Bees.

Enclosed please find 4 bees. Will Mr. Heddon please state their name and occupation? They are small, and I find them at the entrances of my hives. The other bees do not try to sting them, but will catch and fly away with them, but they soon return, flying clear into the hive. In a few minutes they appear on the alighting-board. They are very quick, and jump at almost every loaded bee that comes, until it is taken out for another ride. I find some of them at almost all of my 30 hives, but more at some of the Syrians.

Oregonia, O. W. C. Steddom.

Answer.—This case is entirely outside of any of my experience or observation. The sample bees appear to be of the yellow-banded variety, and quite handsome little fellows, but very, very small. It must be a case of peculiar abnormality, but is more of an enigma than I can solve.

Use of Honey from Diseased Bees.

If bees die of diarrhœa in the winter and leave the combs full of honey, will this honey injure a swarm if given to it? C. W. Bruner.

Bascom, Ind., May 31, 1884.

Answer.—I have no fears in giving such combs to swarms. Whatever the combs did contain when the old colony went into winter quarters to die, or whatever they may contain after their demise, the swarm will replace with food of the season in which they are hived. This is a rule, with very few exceptions; but not where the hive is constructed upon correct principles, and the swarm contains a vigorous queen.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., June 24, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted. Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. Chas. F. Muth.

NEW YORK.

HONEY—Present quotations are as follows: Fancy white in 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market.

BEESWAX—Scarce, and sells readily at 36@38c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—Choice white comb honey in 1 lb. sections brings 18c; in 1½ to 2 lb. sections, quotable at 16c. Comb honey discolored and in undesirable shape is selling at 10@12c. Extracted honey is in light demand at 6@8c. Manufacturers of syrups and bakers say that the low price of sugar is the reason why they do not use as much honey as formerly. There is very little desirable comb honey on the market.

BEESWAX—Is scarce and fancy yellow brings 38c. Good beeswax, but dark, and having more or less of refuse matter in it, quotable at 30@33c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—Offerings are mostly of ordinary quality, especially so of comb. The demand is very light. Sales of candied extracted are quoted at 5c. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 6@7c; dark and candied, 4@5c.

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—Nothing doing now in comb honey, except in a very small way, and will not likely be until the new crop comes in. I quote choice white nominal, at 14½@15½c. Dark and irregular, no sale at all. Extracted in fair request at 7@8½c. Some new Southern honey (extracted) arriving.

BEESWAX—Nominal, at 30@35c.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8c.

Geo. W. Meade & Co., 213 Market St.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies	(120 pages)......	$1 00
" 100 colonies	(220 pages)......	1 25
" 200 colonies	(420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports — a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount. post-paid.

What they Say of it:

From Prof. A. J. Cook, Lansing, Mich.—"I have greatly to thank you for getting up the exquisite little Convention Hand-Book. Surely the old 'saying' is true—being a thing of beauty, it ought to be a joy forever."

From Mr. A. I. Root, Medina, O.—"Send me —— dozen of the Convention Hand-Books. We have had quite a number of inquiries for something of that sort, and yours seems to be quite nicely gotten up, and just what is wanted."

From J. E. Pond, Jr., Foxboro, Mass.—"The Convention Hand-Book is just the thing. The digest of Parliamentary Rules it contains will prove of great value to every one. I trust it will receive the patronage it so well deserves."

From Mrs. L. Harrison, Peoria, Ill.—"The Bee-Keepers' Convention Hand-Book is a gem. It should be in the hands of every one who attends a bee-convention, and then there will be no need of embarrassment on account of ignorance of Parliamentary Rules. Accept my thanks for sample sent."

From G. M. Doolittle, Borodino, N. Y.—"I am in receipt of the new Convention Hand-Book, and must congratulate you on the happy thought of such a work, and the neat appearance of the book. It is a work you may well be proud of, both as to the matter it contains, and the splendid material used in its make-up. It will meet a long-felt want; and, were it so that I could attend conventions as in former years, ten times the price would not seem too much to pay for it, for by the instruction therein given, any man could be kept from many a blunder, much to his mortification. I hope in the near future to again be at liberty to go to conventions, when I shall prize the work very highly."

James Heddon, Dowagiac, Mich., writes:—"The Bee-Keepers' Convention Hand-Book is received. I saw it advertised, but conceived no approximate idea of its great value to bee-keepers attending conventions, until I perused it. Many times the price of my copy would be no temptation for me to do without it. It will make us all want to talk at once, I fear. You deserve the thanks of all, and I herewith tender mine for this helper."

☞ The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.

* * *

☞ Several hundreds of subscriptions expire with this number, which completes the first half of the year. We desire to impress all with the importance of *renewing at once*, to save themselves annoyance by the loss of several numbers, and also save us the trouble of removing the names from our type mail-list, and then setting them up again a few days afterwards. Those who desire to have the Bee Journal continued until they *order* it discontinued, should notify us of the fact, and we will so mark it on the mail-list; then no numbers would be lost or trouble made for any one.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the Bee Journal as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly Bee Journal and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

The Countess of Monte-Cristo; being the companion to Alexander Dumas' Celebrated Novel of "The Count of Monte-Cristo," and fully equal to that world renowned novel, is in press, and will be published immediately by T. B. Peterson & Brothers, Philadelphia. It is a work of extraordinary power, fascination and interest, while it is great in plot, incidents and characters.

ALFRED H. NEWMAN,
Dealer in all kinds of
APIARIAN SUPPLIES,
AND
HONEY AND BEESWAX,
923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 5 cents per pound** above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

BEESWAX.

I pay **34c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

NEW AND USEFUL
Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

BEE-**KEEPERS,** before ordering your
APIARIAN SUPPLIES,
Send for our large Illustrated Catalogue, sent free to any address.
10A24t **E. KRETCHMER, Coburg, Iowa.**

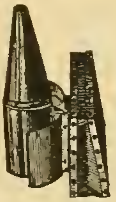
Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

BLAINE Agents wanted for authentic edition of his life. Published at Augusta, his home. Largest, handsomest, cheapest, best. By the renowned historian and biographer, Col. Conwell, whose life of Garfield, published by us, outsold the twenty others by 60,000. Outsells every book ever published in this world; many agents are selling fifty daily. Agents are making fortunes. All new beginners successful; grand chance for them; $43.50 made by a lady agent the first day. Terms most liberal. Particulars free. Better send 25 cents for postage, etc., on free outfit, now ready, including large prospectus book, and save valuable time.

ALLEN & CO.,
AUGUSTA, MAINE.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

For Bees, Queens.

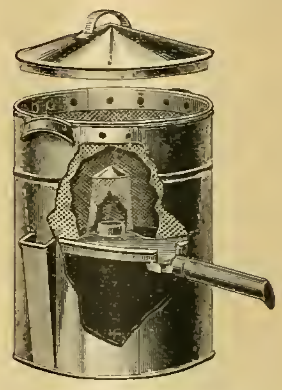
Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

LOCAL REPORTERS WANTED.
We want a local reporter in every farming community to furnish us from time to time such facts as we may require. Full particulars regarding services, compensation, etc., will be furnished on application. Address Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A1st

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

EXCELSIOR
WAX EXTRACTOR



The advantages of this Extractor are:

1. It is more easily operated, there being no necessity for removing the top to refill with water.
2. It melts quicker, because the wax is brought into a more direct contact with the steam.
3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.
4. The filler for water acts also as an indicator as to the amount of water in the boiler, as when the steam escapes through the filler, more water will be required.

Keep a kettle of hot water ready to fill when required. We make two sizes, the smaller one having a larger capacity than the Swiss Wax Extractor.

Price, small size, $4.00—large size, $5.00.

ALFRED H. NEWMAN,
923 West Madison St., CHICAGO, ILL.

DR. FOOTE'S
HAND BOOK OF HEALTH,
HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness.
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

WhitePoplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

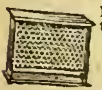
GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.
4A1y

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY**, Wenham, Mass.

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

F.DN. MILLS. 10 INCH $ 15.00
W. C. PELHAM,
MAYSVILLE, KY.

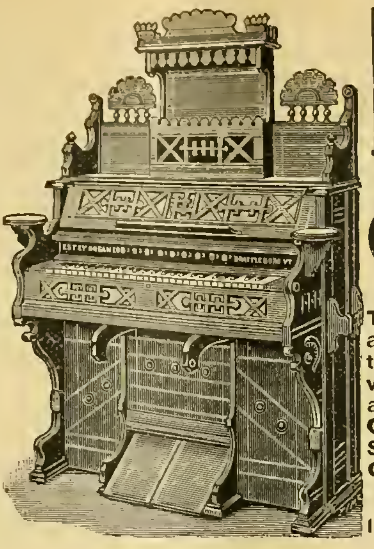
37A1y

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 a year.



BUY AN ESTEY ORGAN

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,
188 and 190 State St., CHICAGO.

Bingham Corner.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,
May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,
B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,
G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

IF YOU WANT

—A—

VEHICLE,

SEND A POSTAL CARD TO THE

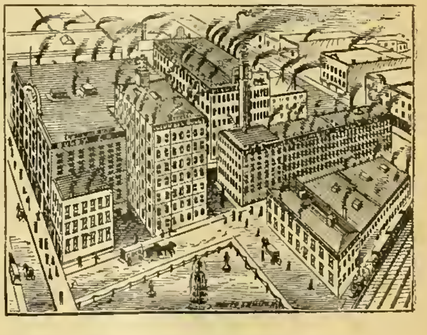
COLUMBUS BUGGY CO.

COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

1868. 1884.

HEDDON'S COLUMN.

BEST GIVEN COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey.......................	..$3.00
The above Hive complete for both in one	4.50
One Hive in the flat................................	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from...	$ 3 00
Untested, to breed from	1 25
Untested, after July 1st....	1 00
Untested, (per doz.) after July 1st............	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.
Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition OF BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
GEO. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

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Lock box 995, Belleville, St. Clair Co., Ills.
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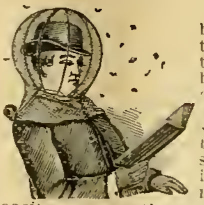

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THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., July 2, 1884.

VOL. XX.—No. 27.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

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☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed).

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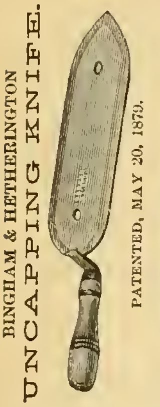

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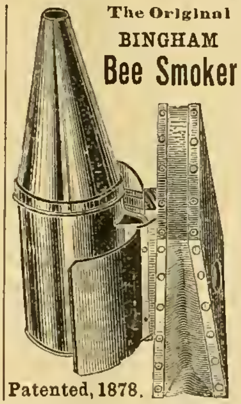

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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JULY 2, 1884. No. 27.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Markets for Honey in Asia.

In the London *Telegraph* of recent date, we find an article on the uses of honey in India, and setting forth the inducements as well as the difficulties in the way of finding an excellent market there for our surplus honey. As we feel sure that our readers will be much interested in this article, we will copy the following portions of it:

Bee-keepers will be interested to know that, according to the results of recent inquiries made by the government of India, a large market for their produce appears to be open in our Eastern Empire. This at any rate is certain, that honey is everywhere in demand throughout the peninsula for domestic, medicinal and sacrificial purposes, and that at present no attempt has been made by indigenous industry to meet it.

The Oriental, wherever you find him, is a great consumer of sweets; and, just as the British workman spends his spare half-pence in liquid refreshment, so the Eastern, seeking to recruit himself after a bout of work, looks out for the nearest lollipop stall.

Nor should it be forgotten that in religious offerings also, candies play an important part. There is nothing the deities like better than lollipops—so, at least, the priests tell such votaries as cannot afford more costly offerings—and the shrines are, therefore, liberally supplied with sweet confectionery.

Now, honey is an important ingredient of many of those things for which Orientals, both human and divine, have such a sweet tooth; and at present the amount in the market is nowhere commensurate with requirements.

Medicinally, as a gargle, and a cordial especially, the bees' treasures are in equal demand in all the Presidencies, but are not always obtainable when wanted. Yet India has been specially favored by nature in the matter of bees, for the indigenous varieties of those insects are very numerous.

The Hindoo, however, classifies them much as children classify bears—there are, they say, big bees, middle sized bees, and little bees; and the first two kinds are of no use for domestication, as they have stings. The third, they say, might be of use for hiving, but unfortunately it is very small. Some describe this stingless insect as "a quarter the size of the house fly," others "about as large as a mosquito," while one says "it should perhaps be called a gnat rather than a bee."

This delightful innocence of entomology is not more refreshing than the Oriental's idea of the sting of the bee being a fatal objection to its utility under cultivation. But we should not forget that he wears very scanty clothing, and that few of us, even the most expert, would care to be honey-taking with no more personal protection than a waist-cloth round the loins, and a dab of yellow paint on the forehead. It would require something more than even the sang-froid of a professional bee-keeper to venture among the angry bees in such Garden of Eden apparel, and a good deal more than good manners in the insect to forbear attacking such an extent of undefended surface.

There remains the fact that India possesses several breeds of bees which have no stings. We should like to hear some disciple of Darwin explain this development of the inoffensive bee. It would be simple enough if the people of India were all hide-bound like their rhinoceroses, or went about iron-clad, for stings would then, no doubt, be given up by the insects as being of no use; but considering, as we have already said, that their costume is so carefully adapted to the climate, and that the provocations to attack are so copious and extensive, the natural fact justifies some surprise. We could have understood the India bees having tips to their tails like scorpions, or being all sting; but when it comes to their deliberately doing away with "the business end" of their bodies, we are compelled to credit the bees with a measure of good taste and magnanimity that entomologists have not hitherto done justice to. These harmless honey-makers, however, produce but poor stuff, and little of it, though in fairness to them it should be said the native has not tested their capabilities with any remarkable degree of judgment or intelligence. Our own apiarists, for instance, will agree with us that to tie a string round the waist of a queen bee, and then tether it down inside a hollow tree, is at best a crude and primitive way of attracting the hive of bees—especially so in a country where the ant, "edax rerum," is omnivorous and omnipresent, and where lizards and large spiders, the particular enemies of bees, swarm in hollow trees.

What the result might be under more scientific treatment remains, of course, a matter of conjecture; but meanwhile it may be accepted as established that the majority of the inoffensive species give only an inferior quality of honey, and that the quantity as compared with that of the insects which are less pleasant to handle, is inconsiderable. It would seem, therefore, that if the experiment of apiculture in India is ever to be made in earnest, it must be made with the bees that have stings, and here the possibilities of yield appear to be almost without limit. At any rate, the quantities said to be produced by wild bees of some of the larger and more ferocious kinds are so large as to be almost incredible.

What, for instance, would our English bee-owners say to a colony that could produce in a year, without any attention, 200 pounds of honey, and half as much wax? or to a wild rock-bee that stores up, without assistance or any incentive beyond its own instinct for industry, an average of 40 pounds in a season? They would probably think such insects as these to be well worth cultivation, and no one could disagree with them if they did.

To be put against this amazing productiveness is, however, the fact that these bees, especially the large cliff-bee, are exceptionally fierce. They are tigers of their kind. Man himself is not safe for them, and beasts perish under their stings without a chance. Combined with the dreadful potency of the venom is a liability to provocation to which only a parallel can be found among beasts of prey when on guard over their young. For these bees will attack a passer-by if he even makes any unusual noise.

A gun fired off in their vicinity sets the whole to buzzing, and the bees—though hornets would almost seem to be a better name for them—if they catch sight of any moving object, whether man or beast, while thus irritated, throw themselves upon it with a malignity that is always terrifying, and an effect that is often fatal. Animals have, as a rule, no hope of escape, for in their panic they attempt to escape by headlong flight, a useless endeavor when pursued by insects so swift of wing. But human beings, either by lying down and feigning to be inanimate, or else by rushing into the nearest water and defending the head till sundown, make their escape, though not always, as the memorial cross on the banks of the Nerbudea, at the Marble Rock, testifies only too well.

From the above, then, it is evident that India possesses an abundance of bees, and offers also a prodigious market for honey, but that hitherto, owing to local causes, the industry has never been systematically developed. Whether it can be, except in purely European hands, is very doubtful, for the native in India has little taste for new enterprises. At present the honey-takers belong only to the lowest castes of the people, chiefly the poor jungle tribes who literally pick a substance under the trees and off the rocks of the wildest parts of the interior of the country; and to enter deliberately upon a system of bee-rearing would seem to the conservative Oriental like descending to a lower sphere of work to take the bread from the mouths of inferiors.

As it is he only recognizes their existence with a lofty indifference, and to compete with them in the bazaars in the vend of honey would present itself to him as an intolerable social degradation. So that to induce the Hindoo to turn to apiculture, it would be first of all necessary to persuade him to revolutionize both his apparel and his ideas of caste occupations. But in the hills, where the thrifty mountaineers have no compunction as to the kind of work they will do so long as it helps them to make both ends meet, the experiment could be made under far more favorable circumstances; while the numerous mission stations—where the profession of Christianity levels all distinctions of caste, and requires a more liberal distribution of clothing over the body—would seem to afford excellent nuclei for bee-cultivation. In the meantime, however, an exceptional market would seem to be fairly open to the European producer. Not only has every one in the country a sweet tooth, but offerings, if made in honey, are specially acceptable to the divinities.

Sweet Clover as a Honey Plant.

Mr. J. W. Walker gives his opinion of *melilotus alba* as follows in the Highland, N. C., *Enterprise:*

While I am led to infer that the abundant and varied *flora* of this "land of the sky," is perhaps amply sufficient to supply the honey bees, yet it is suggested to me that you may have some sections where the material for bees to work upon may be somewhat lacking, and if such should be the case, there is nothing easier than to supply the deficiency by having the *melilotus alba*, which, as a honey plant, stands second to none. It is beautiful when it dons its inflorescent paraphernalia, and fills the surrounding space with a most pleasant and multiflorous aroma, attracting the honey gatherers from every direction. The bee never made its dreamy flight around the classic Hybla or Hymettus more persistently than they do in countless myriads about this plant, which for quantity, quality, and flavor of honey, stands unrivaled. It is not only good for bees, but furnishes good grazing, and makes excellent hay, if cut when from one to two feet high, as it is then tender. It frequently grows to the height of 12 feet, even on poor places. It is thought that its fragrant odor, green or cured, is one reason why all kinds of farm stock are so fond of it. This plant possesses only a tap root, which penetrates deeply into the soil, thereby causing it not to be affected by our dryest summers. It should be replanted about once in three years, and to start it in a new place sow in April or August. Early in the fall it may be seen putting in its appearance for the winter, attaining several inches in height by January, and is the only green plant to act as food for stock during our very often rigorous winters. So to sum up, this plant has advantages more varied than perhaps any other plant known to this country, as it is unequaled for honey, furnishes good grazing for cattle, horses, sheep and swine, makes good hay, and fills the air with a most delightful, pleasant and fragrant aroma.

Honey Cakes.

Mrs. L. Harrison, in *Gleanings* for June 15, writes as follows on the subject of using honey for making cakes and in cooking and preserving fruit:

I have just been eating some of Lydia R. Smith's cakes; that is, made after her recipe, and her papa is a judge of what is "good." These cakes have set me to thinking, and it would be well if it has the same effect on other bee-keepers, "How silly I've been to spend time selling honey to buy sugar, when honey is better, and the purest sweet known!"

I lately read in a paper an account of how many bushels of corn are daily manufactured into grape sugar, to be used, it said, "for the adulteration of sugar, honey, etc." That is one reason why sugar is sold so cheaply; for every pound of sugar has more or less glucose. If I buy glucose, I would prefer to purchase it pure, not mixed with sugar.

I am glad children write, for they are wide-awake, and will set us to thinking, and I hope they will tell us every way they know, how honey is used. If that little girl away off in Washington Territory had not written her recipe, I should have had the cakes made of sugar. If am not mistaken it was a little girl who asked her papa, when she saw him boring a hole with a gimlet, to put in a screw, why the screws were not made with points like gimlets, and so the idea was born, of making screws with points, so that they did not need gimlets to bore holes first.

I have eaten gooseberries preserved in honey, and peaches canned with a teacup of extracted honey to a two-quart can of fruit, and they were excellent. Who will help to introduce honey? Take it to grange suppers, church festivals, old settlers' gatherings, picnics, etc. Use it in making layer cakes, and tell the people the cakes are made of honey, and many cakes of other kinds, of honey.

Will not some little girl work this motto and hang it in the hall of a neighboring grange—"My son, eat thou honey, because it is good?"

Mr. Root gives the following as his comments on the above: "I am very glad indeed to see the tendency to use honey in place of sugar, for cooking. Friend Newman publishes a very nice little book, entitled Honey as Food and Medicine, which every bee-keeper ought to have, if he has not got it already."

Expose Hives to the Morning Sun.

A correspondent has sent us the following from the *North American Quarterly Review* for December, 1882, with a request for its publication in the BEE JOURNAL:

"A story is told that in a village in Germany where the number of colonies kept was regulated by law, a bad season had nevertheless proved that the place was overstocked, from the great weakness of all the colonies in the neighborhood. There was but one exception, that of an old man who was generally set down as being no wiser than his neighbors; and this, perhaps, all the more because he was very observant of the habits of his little friends, as well as careful in harvesting as much honey as he could. But how came his colonies to prosper when all the rest were falling off? His cottage was no nearer the pasture. He certainly must have bewitched his neighbors' hives, or made 'no canny' bargain for his own. Many were the whisperings, and great the suspicions that no good would come of the gaffer's honey thus mysteriously obtained. The old man bore all these surmises patiently; the honey harvest came round, and when he had stored away just double the quantity that any of the rest had saved, he called his friends and neighbors together, took them into his garden and said: 'If you had been more charitable in your opinions, I would have told you my secret before. This is the only witchcraft I have used,' and he pointed to the inclination of his hives—one degree more to the east than was generally adopted.

The conjuration was soon cleared up; the sun came upon his hives an hour or two sooner by this movement, and his bees were up and stirring, and had secured a large share of the morning's honey before his neighbors bees had roused themselves for the day."

CORRESPONDENCE

For the American Bee Journal.

A Woodchuck Manœuvre.

WM. F. CLARKE.

I have had several tussels with Mr. Heddon, and always, until now, he has taken a good square "hold;" but in his article on "Priority of Location," on page 340, so far as I am personally concerned, he fails to grip, and only dodges the points I made. Perhaps this is not altogether surprising, in view of the fact that he attempts to floor both Mr. Doolittle and myself at once, and I suppose that either of us is conceited enough to think it will take all his time for him to do it one by one.

Mr. Heddon deals me out a large ladle of taffy, which, being as fond of as most weak mortals are, I have swallowed with a great relish; the result being that I feel very much like the historic "Jack Horner" when he got through with his Christmas pie. This is perhaps why I am not quite willing to let Mr. Heddon have the last word on the present occasion.

He says: "Mr. Clarke should not claim better judgment in regard to the honey-yielding capacity of my own locality, than I have after watching the results in it for 15 years." I did not "claim better judgment;" I merely said, "I have an impression." This is greatly strengthened by Mr. Heddon's statement that he is stocking his field, the present spring, with nearly double the bees he has been in the habit of keeping, which is either an admission that he has underrated it in the past, or that it has improved by spontaneous growth or artificial seeding and planting.

After trying, in my article, to stiffen Mr. Heddon's backbone, it is gratifying to find him expressing the belief that now he has such "a good start in the business," that he is not likely to be troubled by the rivalry of a competitor with enough more of energy and intelligence to run him out!

But I took up my pen mainly to point out what I have called in the caption of this article, "A Woodchuck Manœuvre," on Mr. Heddon's part. I do not mean any disrespect by this comparison, which, it seems to me, is a very striking one. How often do we see this little creature poising in a calm and dignified manner beside its hole apparently regardless of the fact that it is pursued. But no sooner does the pursuer come to close quarters, than Mr. Woodchuck dives into his hole, where he knows he is perfectly secure. Mr. Heddon's honey-producing business is to him what its hole is to the woodchuck.

He takes the ground that no one can form a correct opinion on the question at issue, unless he derives his income wholly from apiculture. Even then it seems to be difficult, for Mr. Doolittle is mistaken as well as myself. It is my misfortune, or my fault, that I do not "have a necessary concern in the interests of honey-producers." My case is, apparently, a very hopeless one. Mr. Heddon is not only of the opinion that I am mistaken now, but "always will be, I presume, until he lays aside all other sources of income, except apiculture. *Then, in a few years he will get at the facts.*"

"Lor'-a-massey!" what chance is there for me? I am ruled out of the race altogether. Life is too short for me to change my business, adopt another, and prosecute it for "a few years" in order to qualify myself to form and express an opinion which will not at once be branded as necessarily "mistaken."

Let us turn the cake over. Mr. Heddon and I differ far more widely on a subject which bears about the same relation to my livelihood that apiculture does to his. Now if I were to take the ground that he is, and always will be mistaken on the subject of religion, because he does not lay aside all other sources of income except preaching, what would he think of my line of argument? I fancy he would have a vision of a reverend woodchuck diving into his hole.

Speedside, Ont.

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Bee-Keepers' Magazine.

Cuba Flora and Honey Production.

A. J. KING.

The Island of Cuba is about 650 miles in length, extending nearly east and west, with an average breadth of about 50 miles.

A range of mountains traverses the whole length, nearly in the centre. At the eastern end they attain an elevation of 8,000 feet above the sea, but gradually diminish in height till at the western terminus, they are scarcely 1,000 feet high. From the base of the mountains, the country opens into extensive meadows and beautiful plains, which extend on either side of the central range, down to the ocean, where, in some places, the land is swampy.

Owing to the small breadth of the island, and the nature of the soil, there are no large rivers, yet the undulating surface being continually renewed by so great a variety of vegetation, gives rise to the most beautiful landscapes imaginable.

Cuba is not destitute of mineral wealth, but the copper mines of the Siera del Cobre Mountains, are the main source of wealth in this direction. Coal, marble, chalcedony and copperas are mined to a limited extent. There is also a thick firm slate, of a dark blue color, almost equal to marble, which is used extensively for pavements and for floors in some of their finest edifices.

Some of the finest mineral springs in the world are to be found on the island, and are patronized by patients from all countries.

In some parts the limestone constituting the secondary and tertiary formations is exceedingly porous, and caverns, some of great extent, are common.

We visited what is known as the "Caves of Balmore," near Matansas, in the western portion of the island. These caves extend for about three miles, much of the distance under the Bay of Mantansas, and are filled with objects of marvelous beauty; numerous rooms of from 200 to 300 feet square and 25 to 75 feet high exist, the walls and ceilings of which are completely frescoed with stalactites of the most beautiful forms, and the floors are covered with stalagmites so grouped as to greatly resemble thrones, beautiful gardens and fine scenery in endless variety, the reflection and refraction of the light from our torches caused the whole to appear like a vast sea of the most beautiful diamonds, and one could easily imagine himself in Fairyland.

The climate of Cuba, though somewhat hot and dry, is more equable than is generally supposed; the average temperature, near the coast, being 78°, while in the interior it is only 73°. Even the hottest months, July and August, give an average temperature af only 83°, and the coldest, December and January, give only 69°. In summer the thermometer rarely exceeds 82°, and in winter it is seldom noticed as low as 50°. The direct rays of the sun are hot, but in the shade it is almost always refreshing, and that feeling of sultriness and stagnation, so common in the North in hot weather, is almost unknown in Cuba, and there is seldom a night, even in summer, when one is uncomfortable under cover. Snow has never yet fallen on the highest mountains, but frost forming thin ice occasionally happens. Hail storms and hurricanes are much less frequent than in the other antilles, and earthquakes are seldom experienced, except in the eastern end of the island. Most of the rains occur from July to September, when it frequently comes down in torrents, but before and after these months only an occasional shower is experienced.

We have spoken of the vegetable productions in previous letters, and so will at present only give a list of some of the more common trees and plants depended on for honey.

The palm tree, at least four varieties, stands at the head of the list, as it affords quantities of delicious honey every month in the year.

The Campanea—four varieties—furnishes large quantities of honey from December to March. In appearance it is amost identical with the "morning glory."

Almergo, or Indian tree, has red and brown flowers, in size and shape the same as the large blue asters of the United States, blooms from October to April, and is a fine honey-producer.

Romorico blooms at the same time, having flowers much the same.

Cedro, a large tree, blooms all through January, and has bright yellow flowers smaller than the *Romorico*.

Mahogany is a large tree, and flowers at the same time as the *Cedro*, and has large, round blue flowers which are very sweet.

Coopa grows only in the immediate neighborhood of the ocean, and blooms every month in the year; its flowers closely resembles the pear.

Harsmendapersa (large tree) blooms twice in the year, in the months of June and December; flowers like the *Coopa*, and is a very excellent honey tree, both as to quantity and quality.

Malla is a weed like shrub, has small yellow flowers, which yield nectar only in wet weather.

Awacasta (large tree) white flowers; blooms during May; the flowers are about the same as our small white asters. It is only a medium producer of honey.

Oranges and lemons bloom profusely in May, and afford only a moderate yield of honey. The bloom closely resembles the pear.

Attahe is a tree with a small yellow flower, blooms during May. The flowers appearing in tresses greatly resembling bouquets. It is regarded as a very fine producer of delicious honey.

Pendahara is a small branching tree, with small yellow, round flowers, blooming from October to February.

Peng Yong is a tree with dark blue flowers, blooming in April. Honey very white, and of fine flavor.

Astronomia has blue flowers; resembles a bean in appearance, and blooms in December. The honey is very sweet, but not so agreeable in flavor as most of the others in this list.

The banana affords but little honey, and not of good quality, it being known as a "dead sweet." It affords nectar only immediately after a rain The flowers are few, small and white.

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For the American Bee Journal

Trembling Bees.

O. O. POPPLETON.

I have noticed several allusions to trembling bees in late numbers of the BEE JOURNAL, and I see that none of the bee-doctors seem to understand what is the trouble. Mrs. Harrison has also noticed them, and is puzzled.

I am sorry to say that I am able to give some information in this case; and but for the fact of the condition of my eyes at present, preventing my doing any amount of pen work, I would give a full description of the disease, with such facts regarding it as my observations have taught. I will endeavor to do so some time during the season.

It is a very bad disease, which is to a certain extent contagious. It has been in my apiary every season for the past 4 or 5 years; it having gradually grown less each year since its first appearance until this season, when it is again bad. It has already caused the loss of several colonies this season, and may cause more.

I have had some correspondence with Prof. Cook in reference to the origin or cause of the disease, but have not succeeded in discovering the cause. I am intending to make more thorough investigations than any we have yet made. I judge, from experiments so far made, that sick bees will carry the disease from one hive to another; but that brood, honey, etc., can be safely given from a diseased colony to a well one without danger of contagion, provided no bees are transferred.

The disease is very irregular in its coming and going. It will sometimes disappear suddenly from a badly-infected colony, and I have never been able to find out what caused its sudden disappearance.

I cannot at this time attempt to describe the disease, its peculiarities, etc., as it should be done, but will do so as soon as possible, together with the results of whatever experiments I may make this summer. I only call attention now to what may be a very serious matter to others, as it has been and is to me, with the hope that some one will determine its nature, and find a remedy.

Williamstown, Iowa, June 18, 1884.

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Bee-Keepers' Guide.

Do Bee-Keepers' Conventions Pay?

G. M. DOOLITTLE.

Well, that depends upon the spirit in which they are conducted. If they are simply for the purpose of getting a crowd of bee-keepers together, the majority of whom are obliged to listen to the dissatisfaction of a few who wish to discuss our bee-literature, or meet for the express purpose of puffing their wares, then such conventions are not beneficial. If, on the contrary, one convenes wholly for the purpose of discussing subjects connected with the practical part of bee-keeping, each one freely imparting knowledge on any subject to which he can add his mite, so that all are willing to give an equivalent for the knowledge gained, then I say bee-conventions will pay.

Had I been to our last Northeastern Bee-Keepers' Convention when they were discussing "bee-literature" to the benefit of none, but much to the disgust of many, thereby making enemies and scattering discord throughout the country, I should have tried to have instituted a discussion regarding some practical question pertaining to bee-culture in place of it.

If I disapprove of the course of my lawyer, I shall not employ him, and so with others until such a lawyer is obliged to quit his profession for lack of patronage. Of what account is it to him for me and others to be always talking against him and still always employing him in every suit. "Actions speak louder than words." Most of those who condemn the BEE JOURNAL, *Gleanings*, etc., keep right on taking these papers, and by their actions say they cannot get along without them. Hence, all this waste of time and temper is only a good advertisement for the papers they would feign have the world believe they are trying to kill.

There are three points to be kept in mind in attending conventions, if we would make them pay. The first is, we should forget all the cares and duties which have pressed upon us during the year, and go to the convention like a boy let loose from school, to recuperate our health and life, by a free and social intercourse outside of convention hours. By such intercourse we often learn more of value than we do during the hour the convention is in session.

"But," says one, "I can go over to A's and chat with him on bees, and save the expense of attending the convention in a distant city."

This is so, but you cannot see B., C. and D. there, besides a host of others with whose names you are familiar, many of whom you could not see except at a cost several times that of going to a convention.

I fear we do not prizé these social privileges high enough. There are things which pay besides money getting, and the social part of life is one of them.

To best illustrate this, I will give a little anecdote. A miserly man in this vicinity hired a man who was in the habit of attending all the fairs and places of social enjoyment; and after his going to such places several times, when the employer thought it would be better for his interest to have the laborer stay and work, the employer addressed him thus: "My friend, let me say to you, you are squandering your time in attending these fairs and picnics. If you would stay away from them and work, you would save one dollar a day, which, if laid up, would so accumulate that in old age you would have quite a snug sum saved that will now be wasted." The laborer listened patiently till the lecturer was finished, when he straightened up and said: "Mr. H. I expect I am going through this world now for the last time, and as this is so, I must get my pay as I go along. I never expect to come this way again, so of what use would that snug sum be to me after I have passed away. I propose to get some good of life, as my pay, instead of spending my life for naught save money."

Our second object is to get all the information we can, so that we can put it in practice during the season, and, if of value, impart this value at some future convention or to a bee-keeping neighbor. To best do this, I place myself in the position of a reporter, and jot down on a book the leading thoughts of each speaker, so that, when I arrived at home, I can go over this report, digesting it. What I think of value, I write out in my reference book, under the month during which it is applicable. This reference book has also in it all the good things I read in the BEE JOURNAL, each one put down under the proper month, so that under June we find what A. said at the convention, regarding the best method of swarming, and what is said on certain pages about putting on sections, etc. Thus we have all the good things stored up from the convention and otherwise, applicable to the month of June before us in such a shape that we can give them a practical test and tell at the next convention of that which proves of value, and throw away the rest.

Thirdly, we want to examine all the implements, hives, etc., to see if any of them, or parts of the same will help us in securing our product in better shape, or give us more than we already secure with our fixtures.

To illustrate: One little thing I learned at a convention several years ago has paid me for all I ever spent attending conventions. It was this: Formerly my shipping cases had always bothered me, leaking so that when I piled them up on top of the other, the top one would leak a few drops, more or less, on to the case of the next one. When they were shipped, the dust would settle and stick to these places, thus spoiling the beauty of the nicest case. I tried halving the joints of the cases together, and numerous other ways, but leak they would, till I learned at a convention that a sheet of good manilla paper folded around a board so as to make a tray which would just slip into the bottom of the cases would catch and contain all the drip. By putting little strips across the bottom of the cases ¼ of an inch square, the sections were held above the drip, and thus all was kept clean and nice for the retailer.

I might give other things I have learned and other ways of making a convention pay, but it would make this article too long.

Borodino, N. Y.

For the American Bee Journal.

Deep or Shallow Frames.

WILLIAM HALLEY.

A good deal has been said about a standard hive. You will get people to think alike on this or any other when they look alike; but if it can be shown by actual test that one is any better than the other, it may have an influence with some. With this end in view I propose to give an old man's experience, hoping that others may test it fully.

I suppose that, perhaps, I made the first Langstroth hives in Winnebago county; at least I knew of none at that time. In the spring of 1865, I made a dozen hives according to Mr. Langstroth's directions; before I filled any of them, however, Richard Griffiths brought some filled with bees from Freeport. I bought Italian queens from Mr. Langstroth 15 years ago; these were the first queens that I know of being sent to these parts, and Mr. Langstroth was the only person, as far as I know, that sold queens at that time.

But to return to the hive; I thought after a time, that the frame was too shallow (9⅛ inches) for successful wintering. I think now the trouble was more the fault of being a beginner—a wish for too rapid increase, accompanied with bad seasons, and not knowing as well as I ought, how to take care of them. In late years I find no difference between wintering bees in them and in the deeper hives.

At any rate, I altered most of my hives over so as to take a 11-inch frame. I thought they would swarm less and throw larger swarms. I found that the frames were difficult to handle; being apt to break down in hot weather. I did not gain much in regard to swarming, and they are very heavy to carry into and out of the cellar; but last spring I had 5 colonies in the shallow hives, and 10 in the deep ones, all in good condition. I put on a nest of 8 sections, partly filled with comb. When white clover bloomed none of them had much honey; unexpectedly I noticed, after a time, that all those in the shallow hives were working freely in the boxes, and had stored, I think, an average of 25 pounds each, before the bees commenced in the deep hives; the difference was so marked that I resolved to keep an account of them separately. The result is, that from the 5 shallow hives I got 400 pounds of honey and 4 swarms; they did not swarm so soon as those in the deep hives, and I think the hives contained more bees and gave stronger swarms.

From the 10 deep frames I got 8 swarms and 300 pounds of honey—this is at the average rate of 80 and 30 each. It will be seen that the deep hives had more room to fill up below, and several colonies in them did not get up to full working force as soon as they ought, but there was none that stored less than 15 pounds in the sections. I hope to be able to test this matter more fully another year. If I can get 25 pounds of white honey in sections, it will be worth more to me than the entire contents of a well-filled hive in the fall, as I do not extract, and I have to use brimstone to keep down the surplus colonies.

I will say that there are now about 800 Langstroth hives in use within my acquaintance in some of the northern towns of this county. I do not know of but one bee-keeper who uses any other. This does not look much as though the Langstroth hive was being abandoned.

Rockton, Ill.

Prairie Farmer.

Why Bees Swarm—Hiving.

MRS. L. HARRISON.

This question is often discussed at bee-keepers' conventions and elsewhere. The *why* always appears to me to be, that the Creator ordained that they should, for the multiplying of their species. When a hive is teeming with population, and honey is coming in freely, preparations are made for swarming. Scientists tell us that when drones are flying in the open air, bees construct queen-cells; but I have opened many a hive, from which an Italian colony had just issued, in search of cells, and could find none. I am not able to say whether the common bees issue without building queen-cells or not.

It is impossible to determine the exact time when a swarm will issue: the bees may have capped their queen-cells, and may have their haversacks packed for their journey, and a sudden rain cause them to suspend operations for the present, and destroy the queen-cells. A sudden check in the honey flow may cause them to do the same thing. Hives may be so full of bees that the outside is nearly covered with them, and their owner watch them for days, a week, or even a month, and they not even issue at all. No bee-master, worthy of the name, in these days of advanced bee-culture, allows his bees to manœuver thus.

There is nothing that delights the ear of a bee-keeper more than to hear the slogan, "the bees are swarming." They pour out of the hive in steady columns, not one looking behind, but pushing straight ahead, rising, circling around until the air seems alive with them. They sing a peculiar tune, while swarming, which is never heard at any other time. When they are all organized in the open air,

"Round the fine twig, like cluster'd grapes they close,
In thickening wreaths, and court a short repose."

It is best to hive swarms as soon as clustered, for they immediately send out scouts in search of a home, and if these remain until they return, no amount of persuasion will induce them to tarry. The peculiar hissing sound they make while swarming, agitates other colonies, and they may issue and unite with the first, until there is a monster meeting, resulting in vexation and loss to owners. Hives and conveniences for speedy colonizing should be in readiness, and as soon as the bees are fairly clustered, remove them to the home they are to occupy. Sometimes it answers best to place the hive where it is to remain, and have a smooth board or a sheet, whichever is preferred, in front, and carry the bees to it; this can be done nicely when the limb or twig upon which they have clustered is removed from the tree. If placed in front of the hive, and slightly jarred, the bees will enter, uttering a joyful note that a home is found, and calling to their companions to come on.

When a swarm is large, and rich in honey and wax, bees frequently fall in large bunches on the ground; in such cases bring the hive to them, but as soon as they are all in, put it on the permanent stand before the scouts return.

A lady who is engaged in bee-culture, writes me she fears being unable to hive her swarms. She says: "I have supplied myself with all necessary dress, and with hiving-box, hook and poles, also with a hiving-bag, with a hoop in the end, and if necessary can climb a tree." Some apiaries are supplied with large baskets, lined with muslin, and have a burlap cover or flap, which can be turned over when full of bees. When many swarms are issuing, the bees can be left covered up for a short time, without detriment. Fountain pumps are a convenience in wetting absconding swarms, and in preventing swarms from uniting. Newly hived swarms should not be left in the sun; neither should hives be used that have been exposed to its rays. Bees are excited and hot while swarming, and if not put into a cool hive, in a shaded place, will desert. It is not necessary to wash a hive with apple leaves or mint, as our grandmothers did, but a bucketful of fresh cold water may be dashed into a hive, washing out the dust, and making it fresh and cool. Bees always desert a hive for good cause; it may have a disagreeable odor.

Peoria, Ill.

For the American Bee Journal.

Michigan Hybrids.

W. H. SHIRLEY.

My experience so far with the Michigan hybrids is, that they have no control over the weather, so far as I can see, and in consequence have to gather thin honey sometimes, or none at all. Such was the case here in 1882 (part of the season), and to put a frame filled with honey in any position except the one in the hive, would cause the honey to run out. I can well see why Illinois doubts our word, with her strain of bees, for a description of the same see pages 391 and 392.

In regard to reversible frames I stand reversed, because by their use I now can see that a larger majority of our frames are more perfectly filled with comb. The brown German bee and the Michigan hybrids with us never needed their combs turned upside down to force them up into the surplus arrangements.

I have read the back numbers of the BEE JOURNAL; also, such part of the "elsewhere" as I could find, and yet fail to see any great bonanza in reversible frames, except the one point mentioned—viz: perfect combs, and that is a valuable point.

Glenwood, Mich., June 23, 1884.

For the American Bee Journal.

Priority of Location.

J. E. POND, JR.

When I wrote my last article on this subject, I intended to stop right there, and not allow myself to be drawn further into the discussion; not that I had nothing more to say, but that I thought enough space had been devoted to a matter that was more of a personal than apicultural nature. When, however, I am attacked as a lawyer, I feel it a duty to make a defence.

Mr. R. J. Kendall, on page 392, admits that *legally* I am right, and then says: "As a lawyer I am not a little surprised at Mr. Pond's taking up the position he does, for the *law* in its principle goes dead against him." Let us try and analyze this somewhat strange idiosyncracy of Mr. K. He states two propositions; first, I am legally right; second, he is surprised that I take the position I do, for notwithstanding the fact that I am legally right, legal principles do not sustain me. Well, I am willing to leave this branch of the subject right there; but Mr. K. goes a step further, and opens up the question of tenures and titles; what point he expects to make by this I fail most decidedly to see; neither do I know of any legal principle whatever, whether relating to tenures and titles, estates in fee or entail, that will give Jones' bees tenure of my estate in fee, even if Jones has stocked an apiary before I get ready so to do. The principles of law, as I understand them, require 20 years of adverse, uninterrupted and exclusive use, to get tenure of my estate in fee. Jones, by squatting on my land for 20 years, may get a legal title to it, but he certainly cannot get such a title through such agents as his bees. When Mr. K. comes to think the matter over a little, he will see that he has made a slight mistake in his application of legal principles; he forgets that bees are partly in *feræ naturæ*, and that while they are considered property while in sight of their owner, or when occupying his hives, the instant a swarm leaves Jones' apiary and settles on my land without Jones' knowledge, the bees become mine by right of possession, if I choose to hive them. What then becomes of tenures and titles?

Foxboro, Mass., June 20, 1884.

For the American Bee Journal.

Manufactured Comb Honey.

J. W. MARGRAVE.

A few days ago I chanced to meet a member of a large grocery firm of St. Joseph, Mo., who very positively affirmed that they had often bought manufactured comb honey of Jerome Twitchell, of Kansas City, that it was sold to them for manufactured honey; that he had met persons who had been to the factory and had seen the machinery, and *knew* all about it.

It was in vain that I told him that was all a mistake, that glucose had often been mixed with extracted honey and sold for pure honey; but that comb honey could not be made by machinery, that that abominable lie was the result of a silly canard written a few years ago, and had to be revamped and peddled around every year or so, and that he was the last man to so peddle it.

I think it due to Mr. Twitchell to say that I think him incapable of any complicity with fraud in such a deal, if it were at all possible.

I told my informant that Mr. Twitchell had more sense than to ruin his business in any such way. If Mr. T. wishes the name of the firm, I can give it, as also the name of witnesses to the conversation who were present; it being in a grocery store where I had gone to try to sell some nice basswood comb honey. Such things are very embarrassing.

At a meeting of our County Agricultural Society last fall, I was asked to speak on bee-culture; at the close of my remarks I was catechised by one old man in regard to feeding bees on glucose and letting them fill up their combs in that way. He said a Mr. H. of Linn County, Iowa, fed his bees on it, two days in the week, and let them work the rest of the time on the flowers, etc., and said he had spoiled the honey made in that county, etc., etc.

Now, Mr. Editor, what can be done to stop all this despicable foolishness, that is corrupting the public mind in regard to the adulteration of honey? It is very damaging to our legitimate business, and we as bee-keepers must do something to vindicate ourselves. What shall it be?

Hiawatha, Kansas.

[The practice of feeding bees with glucose, even though it were of harmless intent, was one of the greatest of curses to the bee-keepers of America. It opened the way for all these foolish stories about manufactured comb honey, etc.

We are glad that these peddlers of Wiley's lies have located it somewhere at last. Now Mr. Twitchell will be able to clear it up, we think.

Mr. H., of Linn County, Iowa, we hope will be able to show that these are but foolish stories of gossippers, without the shadow of proof except, perhaps, the foolish practice of feeding bees glucose to keep them from starving in the spring. Both gentlemen are invited to "speak out" in the BEE JOURNAL.—ED.]

Marshall County, Iowa, Convention.

The Marshall County, Iowa, Bee-Keepers' Association met at Marshalltown on April 5.

The meeting was one of much interest all through, and was well attended. The following officers were elected for the coming year, viz: Joseph Swift, President, State Centre; G. W. Keeler, Vice-President, Marshalltown; J. W. Sanders, Secretary, Le Grand; and G. W. Calhoun, Treasurer, Marshalltown.

The Secretary made the following report on the subject of a better display of the apiary at our county fair:

I had a conference with the officers of the fair, and was promised a department for the apiary, and a donation of $25 in premiums and fixtures for this important industry. By request of said officers, I prepared a premium list for the fair, including almost all the arts and novelties of apiculture, the object being to promote and encourage this industry in a practical and scientific way; and not for the money we may obtain on premiums. In this way we can learn much from each other, and at the same time encourage the sale of our honey.

On motion of Mr. Nichols, it was decided that the society increase the premiums of said list by donations, and $8 were subscribed and paid in for that purpose. The executive committee were appointed to have charge of this donation, and still solicit aid by subscription for this purpose, it being the desire of the society that $50 more be raised for this purpose, which would aid the fair appropriation very much.

After an extensive and instructive discussion on "Spring Management," concerning "Summer Care of Bees," Mr. J. Moore said he had not given his bees the attention they needed in the past, owing to his farm work, but intends to give more care in the future. Had tried dividing, but did not like it, for he got 3 or 4 weak colonies instead of 2 good ones.

"How many swarms would you allow to the colony?" "Only one, and if second swarms issue would double up. I unite them by the use of smoke."

"How do you manage two swarms settled together?" "I take two hives and a sheet; shake the bees on the sheet and start them to both hives, and capture one of the queens so as to prevent both going into the same hive, then add the captured queen to the one that proves queenless."

Mr. L. Coaper sprinkles with water to separate the swarms.

Mr. W. P. Cover sets out as soon as it will do in the spring, feeds rye flour and gets them to swarming as soon as possible. He was questioned:

"How do you prevent swarming too much?" "I kill the old queen that issues with the first swarm, and return the swarm to the hive they came from, and when it swarms again with a young queen, I hive this swarm. I some times add a new swarm to a weak colony. I had 23 swarms in one day, last summer. When two or more settle together, I separate them as has been stated, by the use of a sheet and two or more hives to drive them into. I use 5-pound boxes for surplus honey. I never keep light colonies, for my object is honey and not increase in number."

On "Profits of Bee-Keeping," Mr. G. W. Keeler being called for, said he had kept bees for five years. The first two years they did not pay expenses. The third year they made about $3 per colony, spring count. The fourth year, 1882, he began with 23 colonies, and obtained in comb and extracted honey 4,738 pounds, which is 206 pounds per colony, spring count. He sold $700 worth of honey, and had all they could use besides. The expenses were $100. The fifth year, 1883, he began with 37 colonies, took 3,730 pounds of comb and extracted honey; 100 pounds per colony. He had sold $400 worth, and had a quantity on hand yet. Expenses were $100 for hives and surplus arrangements.

Mr. L. Coaper stated he makes his swarms or new colonies after the honey season. His average per colony, spring count, in 1882, was 200 pounds of extracted and 20 pounds of comb honey. He uses a large hive, and has taken from a single colony at one time 2 gallons of extracted honey. He extracts from the body of the hive. In 1882, from the same number of colonies of equal strength run for comb and extracted honey, he obtained ten times as much of extracted as comb honey, and last year six times as much. He obtained in 1883, 100 pounds per colony, spring count. It was not a very good honey year. One trouble in extracting is wet weather. He was questioned thus: "How do you prevent swarming?" "I allow no drone comb, cut out the queen-cells, and keep a good supply of worker comb for the use of the queen. I do not keep so many bees but that I can attend to them in connection with other work. I have Italian bees. I do not use smoke, and I am not troubled with their stinging when working with them, for they have got used to it."

The subject for discussion at the next meeting is, "Late Summer and Fall Care." The executive committee appointed G. W. Putnam, of Holland, and J. W. Sanders, of Le Grand, to read essays. The society then adjourned to meet Saturday, July 5, 1884, at 10:30 a. m., at the Court House in Marshalltown, Iowa.

JOSEPH SWIFT, *Pres.*
J. W. SANDERS, *Sec.*

For the American Bee Journal.

Apis-Americana.

DR. G. L. TINKER.

In working my bees for comb honey without separators, several interesting facts have been developed. The first is, that there is a greater difference in the comb building capacities of the various strains of bees than was supposed.

One caps over the combs very smoothly and white, and builds all of their combs as true and regular as if laid off with a straight-edge. The comb built is also exceedingly delicate, the amount of wax in it being at a minimum, and the nectar stored is as clear as water; the whole being "fit for the gods" truly.

Another strain builds heavy combs (that is containing much wax), although straight, and caps them over roughly, and also only moderately white. The same also stored at the beginning of white clover bloom quite a quantity of wine-colored honey so strong as to be unfit for the market.

Another strain builds delicate combs, but the capping looks as if water soaked. They also build in between the combs many bits of wax or cross-bars, which is a bad trait in any strain.

A strain of German bees, crossed with Italian drones, cap their combs very white but roughly, and are prone to build all of their combs crooked, so that with them it would be impossible to get nice straight combs without separators. They are also inferior in many respects to the Italians, do not make so much honey, and in the heighth of white clover bloom have collected a lot of dirty-colored nectar, and stored in sections. Yet they are located near by.

What bee-keepers want is a strain of bees that will build clean, straight combs without separators, cap them over white and smooth, and at the same time use as little wax as possible in their construction. (True, such comb honey does not ship so well, but those who consume it will appreciate it, and want more.) They must be prolific and good workers, breed up rapidly in the spring, and *swarm early* to get the most out of them.

As I look at it, this is the ideal of what "the coming bee" must be. By a lucky hit I have just such a strain in which every one of the above points would be hard to excel. The strain was produced as follows: The beginning was a pure Syrian queen obtained from Mr. D. A. Jones, and mated on the islands of the Georgian bay. I have her still, although she is now about three years old. She has not yet led a swarm this season, but is soon expected to, as she has led a swarm every year without regard apparently to the flow of nectar, but never early. She is very prolific, and the workers are very gentle to handle, even more gentle than the Italians. Last season there was a second swarm when I opened the hive and began to cut out the queen-cells. There were 25 or more of them, and they were laid on the tops of adjacent hives. I had a number of tumblers to put over them, but not enough, and soon the young queens were flying and running in all directions. After some time I had killed them all but one of the finest and largest. This queen, I think (but of course do not know), mated with an Albino drone. Her bees were very beautiful and gentle, so I bred a number of queens, and introduced to colonies not up to my idea, and these queens were mated with Italian drones. They were at first, on emerging from the cells, almost white, but soon had the general appearance of Italian queens. The bees from each of these queens build comb like the bees of their mother, and cap it over very white. They build no cross-bars of wax, and as truer combs were ever obtained by the use of separators, and the sections used on two of the colonies are nearly 6 inches square. The brood combs, likewise of the new colonies, are built as straight and regular as it is possible to be, and were spaced 1½ inch.

In clipping the fine queen above referred to, in April, I found her to be the largest and strongest queen I ever handled, and I clip all queens held between the thumb and forefinger of the left hand. In breeding up, the past spring, she had 11 Gallup frames filled almost solid with brood on May 1. I then gave her no more, and she led my first swarm on May 24. She could easily have filled 18 Gallup frames with brood by the first of June. Her bees will produce more than twice the amount of comb honey of any Italian colony I have.

Her daughters were in hives made to hold only 9 frames, so I could not give them more combs, and they did not have a fair chance, but far exceed the Italians in the number of bees and the quality and the amount of their work. What these queens require is a hive holding not less than 10 Langstroth or 12 Gallup frames in breeding up. But I have never had an Italian queen that could fill that many frames *full* of brood by the first of June. All my full colonies were fed in April and May, and several Italian colonies were pushed to the utmost, but in every case have turned out second best to the colonies of the new strain which were fed less. and of which less was expected.

What caused me to supersede the other daughters and grand-daughters of the old Syrian queen that I have reared at different times, was because the workers capped their honey so that it appeared water-soaked, and also because some of them had mated with black drones and were ugly. How it comes that the bees of my favorite queen and her daughters build such nice white combs while the others have not, I will leave to others to explain, but of one thing I am assured, the "coming bee" has no German blood in her veins.

New Philadelphia, O., June 25, 1884.

SELECTIONS FROM OUR LETTER BOX

Excellent Honey Crop.

The season was slow here, that is, the early part of it, but is now most excellent for clover surplus. Swarming commenced unusually late, but once having commenced, it is exceedingly rampant, though not equal to last year. We are bound to get an average crop of surplus from clover this season, because we have got it now, and still it comes. Our bees shake their heads at "loose" honey "laying around." They prefer the nectar in its virgin bloom.

G. W. Demaree.

Christiansburg, Ky., June 23, 1884.

Bees Working on Clover.

I started this season with 120 colonies, and they have the boxes mostly filled, but not capped sufficiently to be removed. As the brood-chambers are also full, I find it impossible, in the absence of tiering-up material, to keep them from swarming. Ten swarms yesterday, and more to-day, makes a tired bee-keeper "hump himself."

L. Hubbard.

Waldron, Mich., June 25. 1844.

Honey Report.

My report for 1883 is as follows: I ran 27 colonies for honey last season, which gave me 2,250 pounds of honey, mostly extracted, making an average of 83 pounds and a fraction to the colony. In 1882 my report from 17 colonies was 1,400 and some odd pounds, making an average of 84 pounds and a fraction to the colony. Up to this date, this season, I have extracted about three barrels, and the flow still continues. I have on hand about 500 pounds of last year's crop unsold, which is all granulated, and almost as nice as granulated sugar; the balance I sold at 12½ cents per pound. I have a Root chaff hive from which I extracted 7 gallons of honey at one time, this season, and it will be ready to extract from again in 4 or 5 days. The 7 gallons at 11 pounds to the gallon. would be 77 pounds. Nearly all the honey we have extracted up to this date, this season, is poplar, and so thick that it was difficult to extract. I think this the finest honey produced. I like the flavor of it better than white clover, although it is not so light in color.

John Faris.

Town House, Va., June 23, 1884.

Foundation with Deep Cells.

In the latter part of May I put several samples of the deep-celled foundation, mentioned on page 355, in the second story of one of my hives, and the bees built it up nicely. As far as I can see now, they will make very good combs with it.

Cincinnati, O. Wm. Stuebing.

What Ails my Bees?

My bees have swarmed but once this season. I have 7 colonies in good condition, in Langstroth hives; at least we call them that; the brood-chamber is 12x16, and 10 inches deep, with 6 frames inside and 3⅛ inch honey-board on top, and 3 honey boxes over that.

G. W. Henson.

Dulaney, Ky., June 17, 1884.

[One swarm from each colony should satisfy you, unless you wish increase instead of honey. The hive is an antiquated mongrel, but management is of more importance than the particular kind of hive. You should use one or two-pound sections instead of the 3 large boxes, however. They are completely out of date now.—Ed.]

No Swarms.

Generally, the bees have wintered with only small losses, but they consumed a larger quantity of honey than is usual while in confinement. The spring has been so late, cold and rainy that in most cases the bees have had to be fed until this week; and, so far, there have been no swarms cast that I have heard of yet, and in my opinion, there will not be any for 10 days more. White and Alsike clover commenced blooming one week ago, but yielded no honey until yesterday, and now the bees are working hard. As this is the off year for basswood bloom, there will not be more than a half yield from that; and unless the weather will be favorable for the clover, the yield of honey from it will not be more than half of a crop.

E. J. Smith.

Addison, Vt., June 16, 1884.

Fastening Foundation in Frames.

I am a beginner in the bee-business, and I am having some strange developments and experience. The first of last December I bought 9 colonies in Langstroth hives, moved them 30 rods to my new bee-house all right, and packed them for winter. On March 12, 4 colonies were dead, on March 18 another one died, and by May 1, 7 colonies had died. The 2 saved are now strong and are doing well. My third swarm hung on the outside of the hive for 55 hours before they would all enter at once. I shall never move bees again in cold weather. To fasten foundation in the frames, I slit the top-bar in the centre to within one inch of one end; that keeps them together till they are notched and ready for the foundation; then with a back-saw separate the two halves, start a nail in one-half of the frames 4 inches from each end, and lay the foundation on the other half; smooth and straighten it, bring the other half to its place and drive the nails through, then the top-bar is ready for the frame. In this way I can put on ten times as much foundation in the same time, and in better shape than in any other way.

C. W. Stanley.

Dunlap, Iowa, June 18, 1884.

Not a Honey Plant.

My bees are working on white clover. Enclosed find leaves and bloom of a plant, the seed of which was among some sweet clover seed I sowed a year ago. This plant looks like tansy when first coming up; it has from 10 to 17 stalks from one root, and grows from 18 to 24 inches high. What is it? If it is a honey plant I will let it go to seed; if not, I want to destroy it before it seeds my field.

D. S. Kalley.

Ferndale, Ind., June 19, 1884.

[The plant is *Archangelica hirsuta*, entirely worthless for honey.—T. J. Burrell.]

Bee-Keeping in Texas.

I have before given my experience in apiculture up to Feb. 1, 1883. I began with 31 colonies; increased to 50. However, owing to inexperience and a poor honey season, I had but 45 to go into winter quarters (if I may use such an expression in my extreme Southern home). For on the last day of December my bees were at work on a late crop of sorghum, and the wild flowers of the country. It was well for me (to use a familiar term) that it was an "off year" in honey. It gave me time to study, to read, and to put in practice the working of the apiary. I have studied all the works I could procure, and the Bee Journal, which comes weekly freighted with words of cheer and practical advice. At no time through the winter was there more than 3 days at a time that my bees were not on the fly. On Feb. 2 my bees brought in their first fruits of 1884; they came loaded with pollen. I then began the work of 1884 feeling very much of an apiarist. Out of the 45 I found one dead and 4 queenless, and the majority of the remaining 40 were weak. I fed none, though I see now that it was false economy. From Feb. 1 we had an unusual cold spring. My bees have been up on a "continual boom" of 4 months. By following Doolittle's advice upon spring management, I got my colonies as near the same strength as possible. On April 1, I had my first swarm. I have increased them to 70. On May 1 the 70 colonies took to the horse-mint. I did my first extracting on May 26, then in every 8 days each frame would be full, and the bees were starting in the 2-inch cap. I use the Langstroth hive, but not the standard frame. I run for extracted honey. I changed the frame to run crosswise. I am pleased with the change. I had but few sections, one and two-pound. They have been filled, and so even, without separators, that, out of 200, there is not more than 10 that could not be crated. I have, up to date, extracted some 1,200 pounds, and took 400 pounds of comb honey. I expect another run on the Brazil or red wood. I feel encouraged, and know that I will be instructed for 1885.

Jno. A. Emison.

Mission Valley, Tex., June 17, 1884.

Carbolic Acid for Quieting Bees.

I notice in the Weekly Bee Journal an article on handling or quieting bees, where carbolic acid is used, by an Englishman, and claimed to be superior to smoke. I would ask him if he has had any experience in the use of the acid? Does he use it of absolute strength, or does he dilute it? If so, what per cent. of water does he use? Bees are on a regular "boom" here. My hives are all full of surplus. E. R. W. McCrary.

Lindale, Texas, June 23, 1884.

[Will our English correspondent please reply to these queries.—Ed.]

Poor Prospect in Southern California

The season of 1884 opened with a fair prospect for a good yield of honey, but for the last month we have not had 5 clear days, and it is very discouraging to the bee-keeper in this part of California. Bees have swarmed very well; and swarming is about over. I started in the spring with 67 colonies; increased to 130 by natural swarming. I expect about 30 more. Mr. Enas complains of bad weather in Napa, and says it looks discouraging. John L. Secor.

Monterey, Cal., June 14, 1884.

White Clover Yielding Finely.

White clover is yielding finely. I have never known the bees to be busier than at the present.

W. Z. Hutchinson.

Rogersville, Mich., June 14, 1884.

Married.—At New Boston, Ill., May 15, 1884, at 7:30 p. m., by the Rev. H. K. Metcalf, Miss Mary Scudder, adopted daughter of L. H. Scudder, to Mr. Will M. Kellogg, of Oneida, Ill.

We congratulate our young friend for his wisdom in entering *this kind* of partnership. Being a bee-man ought to insure a sweet disposition, and this in turn will cause the *honeymoon* to shine on through life. We hope the festal board of our friend may, in time, be swarmed with beautiful workers, and not a *drone* among them.—*Magazine.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Cleansing Wax.

1. Which is the best way to cleanse old, dark-colored combs?

2. Is it of any use to cut holes through the combs, when putting bees into winter quarters?

E. W. Merrill.

Barker Creek, June 16, 1884.

Answers.—1. Old dark combs, if otherwise good, need not to be discarded or melted, and they need no cleansing.

2. The "use" of this practice has never struck me with force enough to make me think that it pays for the trouble to bees and bee-keeper.

Removing Starch from Foundation.

Please tell, through the Bee Journal, how to remove the starch or alkali used upon the rolls from foundation sheets. I find some difficulty in drying the sheets when packed. Bees are booming, and hard to prevent from swarming. L. Hubbard.

Waldron, Mich.

Answer.—I know of no better way than rinsing in water. Pile the sheets up edgewise on sloping shelves, and they will soon drain and dry. The white precipitate removing from the use of lye, is perfectly innocent and harmless. I presume the same is true of starch. We know whereof we speak by careful experiment among the bees.

Increase.

I have purchased a superior colony, and I wish to increase the stock as fast as I can. I do not care for honey this year, what is my best method of procedure? I cannot see any queen-cells yet. They are storing fast from oceans of white clover.

Gaylord, Mich. J. H. Scott.

Answer.—There is no method of increase a description of which would be suitable for this department, or which I would advise a beginner to practice. If your colony would rather gather honey than swarm, give them plenty of surplus room. Sell the honey and buy increase, is my advice.

The Use of Salt in the Apiary.

Will it do any injury to throw salt in front of the hives, to kill the weeds? I was told it would kill the young brood. What is the best way to keep the weeds out of the apiary?

A. Subscriber.

Answer.—No, the salt will not effect the young brood if thrown down in front of the hives. I would cut the weeds 3 or 4 times during the season, or lay a board down in front of the hive, or both, and use the salt for some more useful purpose.

Plan for an Apiary.

For the last two years I have been very successful in the culture of bees and grapes. I want to enclose a piece of ground with a tight board fence 6 feet high all around, except the portion near my house, as Mr. Heddon directed on page 396; and on the same page is his plan for locating the hives. The plan, I think, is a good one.

1. Can two hives be set together one facing the east, the other the south; with the end of one to the side of the other in the shape of a **T**, a few inches apart so that one shade or cover will protect them both, two and two, 10 feet apart each way? Will that be too thick—my ground is limited?

2. After placing the hives as above mentioned, then plant a grape vine, 3 or 4 feet south of each hive, setting a good locust or mulberry post, 3 feet deep and 7 feet high, with two cross-bars in the shape of a letter **X** of good wood, and wire interwoven for vines to run upon, making a shade for each set of hives, 6 or 7 feet square overhead?

One of these to 10 feet square will leave 3 or 4 feet all around, by keeping them trimmed while growing. Would such be in the way of the bees, while at work? J. M. Pratt.

Todd's Point, Ky.

Answers.—1. I do not see how you can make one shade board do justice to 2 hives. Again, when manipulating one, the other is in the way.

2. Regarding the grape vines, I prefer a "readily movable" shade, such as the wide board before described; and that I can take out of the way entirely, just when I desire. There are times of the year when we want everything tending to shade, out of the apiary; and when "room is limited," I should certainly prefer the shade-board to a vineyard. The vines would not, if properly trimmed and trained, interfere with the egress and ingress of the workers.

Errata.

On page 405, in the second paragraph of "My Winter Report," read: "and *excess* of pollen not at all. Read, 11 *barrels* of granulated sugar. Let me here add, that the 45 pollenless colonies that could not breed till later in the season, are very preceptibly ahead of those that did; after "untested," remove "to breed from." I suppose it was my mistake. I do not consider any fit to breed from except those tested for qualities, and most thoroughly too.

* * *

☞ The Lucas County Agricultural Society offers the following premiums at its 17th annual exhibition, Sept. 10, 11 and 12, 1884: Best colony of Italians, $10, $8; best colony of Cyprians, $10, $8; best colony of hybrids, $8, $6; best honey, comb, $5, $3; best honey, extracted, $3, $2; best bee-hive, $3. The Bee-Keepers' Association will meet on the second Saturday in July, at the Court House at 1 p. m. sharp. All are requested to attend.

Chariton, Iowa. A. Reusch, *Sec.*

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., June 30, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. Chas. F. Muth.

NEW YORK.

HONEY—Present sales of comb honey are slow, and will be until the new crop arrives. We quote: Fancy white 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market. Extracted, white, 8@9c.; dark and buckwheat, 7@8c.

BEESWAX—Prime yellow, 34@35c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—The new crop of comb honey is coming on the market, and nearly all of the arrivals to note are in good order, and the quality of the honey is of the best, being white, and flavor that of clover and linden; frames are unusually well-filled. The crop of comb honey of 1883 is nearly all cleaned up. We have not had any old comb honey to offer for several days. Extracted honey is in very light demand, and prices irregular; the stocks of it are large.

BEESWAX—Not plentiful, but the demand is also light at 30@37c for fair to prime.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—There are moderate receipts but little or no demand. Values are not well defined. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 5@7c; dark and candied, 5@—

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—Some little activity has developed in the honey market since my last report, and several thousand pounds have gone out in the past few days, both comb and extracted. But it happens to be only a bunching of orders, and has had no material effect on prices, which rule at 14½@15½c for comb, and 7@8½c for extracted.

BEESWAX—Nominal, at 30@35c.

If any one has failed to receive a copy of my little Pamphlet on "Preparing, Packing and Shipping Honey," I will be pleased to mail one free.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 16@17c; extracted, 7½@8c.

Geo. W. Meade & Co., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ We have received the Circular and Price List of Bagnall Bros. & Co. for 1884-85, in Turua, New Zealand. It contains 24 pages and is nicely printed with a cover, and illustrated with lots of American engravings of bee-keepers' supplies. The Bee Journal congratulates New Zealand upon such a creditable enterprise.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports — a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

What they Say of it:

From Prof. A. J. Cook, Lansing, Mich.—"I have greatly to thank you for getting up the exquisite little Convention Hand-Book. Surely the old 'saying' is true—being a thing of beauty, it ought to be a joy forever."

From Mr. A. I. Root, Medina, O.—"Send me —— dozen of the Convention Hand-Books. We have had quite a number of inquiries for something of that sort, and yours seems to be quite nicely gotten up, and just what is wanted."

From Mr. J. E. Pond, Foxboro, Mass.—"The Convention Hand-Book is just the thing. The digest of Parliamentary Rules it contains will prove of great value to every one. I trust it will receive the patronage it so well deserves."

From G. M. Doolittle, Borodino, N. Y.—"I am in receipt of the new Convention Hand-Book, and must congratulate you on the happy thought of such a work, and the neat appearance of the book. It is a work you may well be proud of, both as to the matter it contains, and the splendid material used in its make-up. It will meet a long-felt want; and, were it so that I could attend conventions as in former years, ten times the price would not seem too much to pay for it, for by the instruction therein given, any man could be kept from many a blunder, much to his mortification. I hope in the near future to again be at liberty to go to conventions, when I shall prize the work very highly."

From Mrs. L. Harrison, Peoria, Ill.—"The Bee-Keepers' Convention Hand-Book is a gem. It should be in the hands of every one who attends a bee-convention, and then there will be no need of embarrassment on account of ignorance of Parliamentary Rules. Accept my thanks for sample sent."

From Mr. Jas. Heddon, Dowagiac, Mich.—"The Bee-Keepers' Convention Hand-Book is received. I saw it advertised, but conceived no approximate idea of its great value to bee-keepers attending conventions, until I perused it. Many times the price of my copy would be no temptation for me to do without it. It will make us all want to talk at once, I fear. You deserve the thanks of all, and I herewith tender mine for this helper."

From Mr. G. W. Demaree, Christiansburg, Ky.—"The Convention Hand-Book is the most exquisitely gotten up, and the nicest book in my collection of apicultural works. It contains much valuable information, and especially as many of the presiding officers of our conventions are selected to fill those important positions because of their practical skill as apiarists rather than for their fitness as presiding officers, this little work will fill a long-felt want. Please accept my thanks for your untiring labor to promote the apicultural interest of the country."

From Dr. G. L. Tinker, New Philadelphia, Ohio.—"I prize the Convention Hand-Book very much, and it will be a valuable aid to bee-keepers attending conventions. The questions for discussion are concise, and cover the field of the most interesting and unsettled points in bee-culture. The book will help to systemize convention work, and enable the members to do business properly."

From Mr. W. Z. Hutchinson, Rogersville, Mich.—"If every bee-keeper would read the Convention Hand-Book, and profit by its perusal, our Conventions would be more orderly and have more beneficial."

From Mr. George Hilton, Fremont, Mich.—"I think the Convention Hand-Book is destined to fill a long-felt want, and should be in the hands of every intelligent bee-keeper."

◆

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price *still lower*, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, **40** cents; per hundred, $2.50. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

Syrian & Italian Queens

BY RETURN MAIL.

Tested, $2.50 each. Untested, Single Queen $1.00. Six for $5.50. Twelve for $10.00. Cook's Manual (cloth) with order for Queens, only 90 cents. Safe arrival guaranteed.

I. R. GOOD,
23Dtf SPARTA, TENN.

GIVEN COMB FOUNDATION

And Choice Queens a Specialty.

Circulars and samples free. Send for them. It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.

G. H. KNICKERBOCKER,
23eowtf PINE PLAINS, N. Y.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir: I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker. — To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs: —Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderbaek, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

MANUFACTORY

FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
1Ctf 12Btf DUNDEE, Kane Co., ILL.

SMITH & SMITH

Want to give away 5,000 of their Illustrated Catalogue and Price List of **Bee-Keepers' Supplies. Special Attention** given to the

Simplicity One-Piece Section,

Also Hives, Smokers, Foundation, etc.

SMITH & SMITH,
6D10t KENTON, Hardin Co., OHIO.

YOU NEED the **National Real Estate Index.** Full of TRADES, Bargains and Real Estate news. 50 cts. a year. Sample copy free. Address,
W. L. GRIGGS, Kirksville, Mo.

BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

11,000 SOLD SINCE 1876.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
State Agricultural College, LANSING, MICH.
18C7t 20D12t

1884. JOSEPH D. ENAS, 1884.

(Sunny Side Apiary,)

Pure Italian Queens, Bees, Colonies, Nuclei,

EXTRACTORS, COMB FOUNDATION, &c.

24D10t Address, Sunny Side Apiary, NAPA, CAL.

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For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

TESTED QUEENS, $2; untested, $1; 4-frame Nuclei, $3.50 and $4.50. Mississippi Wax Extractor, $3. OSCAR F. BLEDSOE, Grenada, Miss.
21C12t

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To send a Postal Card for our Illustrated Catalogue of APIARIAN SUPPLIES before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary at the lowest prices. Italian Queens and Bees. Parties intending to purchase Bees in lots of 10 colonies or more, are invited to correspond.

J. C. SAYLES,
51D15t 1B5t HARTFORD, WIS.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

LOCAL REPORTERS WANTED.

We want a local reporter in every farming community to furnish us from time to time such facts as we may require. Full particulars regarding services, compensation, etc., will be furnished on application. Address Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A1st

BEE-KEEPERS, before ordering your

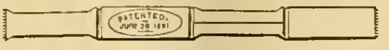
APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

"BOSS" ONE-PIECE

SECTIONS.



We have again increased our capacity for making the "BOSS" ONE-PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS,** to

ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.,
49BCtf Watertown, Wis., Dec. 1, 1883.

ITALIAN QUEENS

AND BEES.

Dollar Queens, 90c.; six, $5.00; twelve, $9.00. Warranted, $1.50; tested, $2.50; selected, 25 cents extra. Warranted pure. Order now and get choice Queens. Send money by P. O. Order, Registered Letter, or American Express.

27Atf **N. F. ASHTON, Davenport, Iowa.**

Reduction in Foundation.

I have a nice lot of **Dunham and Vandervoort Foundation,** which I wish to dispose of in the next 30 days, and have concluded to reduce my price to **48** cts. for Dunham heavy, and **58** cts. for Vandervort thin. Send in your orders and have them filled at once.

J. V. CALDWELL,
27A1t CAMBRIDGE, ILL.

1884.

6 Warranted Queens for $5.

Write for Circular. **J. T. WILSON,**
1BC18t MORTONSVILLE, KY.

BLAINE Agents wanted for authentic edition of his life. Published at Augusta, his home. Largest, handsomest, cheapest, best. By the renowned historian and biographer, Col. Conwell, whose life of Garfield, published by us, outsold the twenty others by 60,000. Outsells every book ever published in this world; many agents are selling fifty daily. Agents are making fortunes. All new beginners successful; grand chance for them; $43.50 made by a lady agent the first day. Terms most liberal. Particulars free. Better send 25 cents for postage, etc., on free outfit, now ready, including large prospectus book, and save valuable time.

ALLEN & CO.,
26A4t AUGUSTA, MAINE.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to
Ctf A. I. ROOT, Medina, O.

GIVEN FOUNDATION.—As I have purchased a Given press, I will make Foundation on the same, this season. Will take Beeswax in exchange for Foundation or work it up for two-fifths.
23D4t A. WORTMAN, Seafield, White Co., Ind.

Italian Queens & Bees

Warranted Queen, each, $1.00; 6 for $5.00. Tested, $2.00 each. Special prices on large orders. **Orders filled promptly.** If you want bees for **business,** give me a trial order. Safe arrival and satisfaction guaranteed. Send for Circular giving full particulars.

CHAS. D. DUVALL,
27Ctf Spencerville, Mont. Co., Md.

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VEHICLE,

SEND A POSTAL CARD TO THE

COLUMBUS BUGGY CO.

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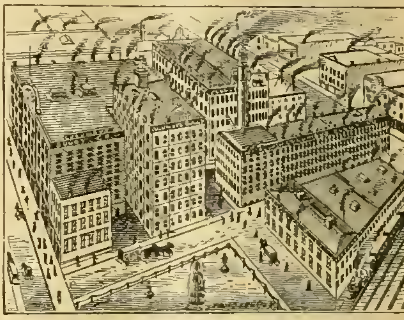
When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

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Bees! Queens! Nuclei!

INSTRUCTION IN BEE-KEEPING.

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

QUEENS.—I breed Queens by the best methods and from the best stock. Queens ready after May, 20th. Untested, $1.00; tested, $2.00; selected tested, $3.00.

NUCLEI, with untested Queen, $3.50; with tested Queen, $4.50; with selected tested Queen, $5.50.

INSTRUCTION.—July 7, 1884, I shall begin instructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address, **O. CLUTE,**
10Dtf IOWA CITY, IOWA.

COMB FOUNDATION MILLS.

The "Best" and "Cheapest" in the market. Send for Sample and Price List free.
PAUL SPOERKE, Fond du Lac, Wis.
14Dtf

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

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We are now ready to Book Orders for

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WhitePoplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

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7A6m WILTON JUNCTION, IOWA.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

How to Prevent Swarming.

Send for our 23d annual Circular for particulars.
18Atf **HENRY ALLEY**, Wenham, Mass.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM.
MAYSVILLE, KY.
37A1y

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK C ., Portland, Me. 4A1y

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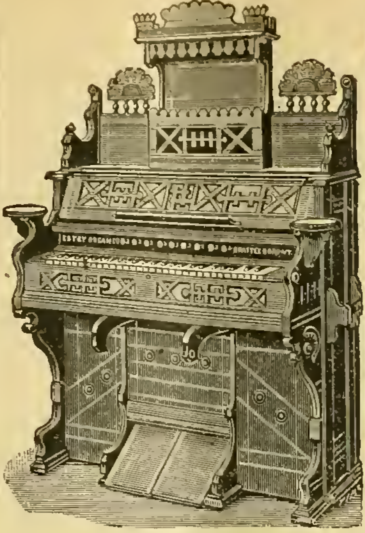
ITALIAN QUEENS, DADANT FOUNDATION, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,
12D8t 4B4t AUGUSTA, GA.



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The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,
188 and 190 State St., CHICAGO.

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.
MRS. FRANCES DUNHAM, De Pere, Wis.

Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.
Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.

Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.

All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.
Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNRAM: Kenton, Ohio, Dec. 29, 1883.

After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.

I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: ' It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is to me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to

FRANCES DUNHAM, De Pere, Wis.
2BCtf

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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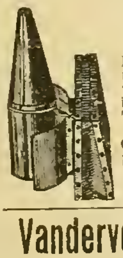
Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT**, Laceyville, Pa.

Bee Hives

AND

SECTIONS.

NEW SHOP AND NEW MACHINERY!!

The Largest Manufacturer of Bee Hives Sections, etc., in the World!

Our capacity now is a **CAR-LOAD** of goods daily. Hives manufactured from soft white pine, and sections from white basswood. Send for our new Illustrated Price List for 1884. It is **very important** you should have our new List before ordering, as prices are arranged differently from last season.

G. B. LEWIS,
1BCtf WATERTOWN, WIS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

NEW AND USEFUL

Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY**, Wenham, Mass.

1868. 1884.

HEDDON'S COLUMN.

BEST GIVEN COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey	$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from	$ 3 00
Untested, to breed from	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.
Address,

JAMES HEDDON.
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition OF BEES and HONEY, OR THE Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees. H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
GEO. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,
Lock box 995, Belleville, St. Clair Co., Ills.
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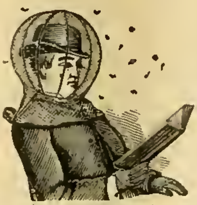
A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

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923 West Madison Street,
CHICAGO, - ILLINOIS.

"STUFF FOR STINGS."

The sting of a bee at times proves serious. "Stuff for Stings" is warranted to cure or money refunded. Try it. Don't wait till you are stung, but send 25 cts. in stamps at once.

MONMOUTH APIARY, FREEHOLD, N. J.
27C2t 7B2t **F. C. LOCKWOOD.**

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4Aly

STANLEY'S Automatic Honey Extractor AND SMOKER.

Send for descriptive Circular and Prices to
G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

65 *ENGRAVINGS*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid . in May and June, each	$ .50
Italian—untested—not warranted, in May and June, each	1.00
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Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7Aly RICHMOND, Fort Bend Co. TEXAS.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., July 9, 1884.

VOL. XX.—No. 28.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **$1**.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

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For either the Weekly or Monthly Editions.

A line of this type will contain *about* **7** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.
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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

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Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview. by sending the names to this office.

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
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and Cook's Manual, last edition (in cloth)	3 25..	3 00
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Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work.........	4 00..	3 75
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Alley's Queen Rearing........	3 00..	2 75
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Honey as Food & Medicine, 100 Copies	4 50..	4 25
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King' Text Book.....................	3 00..	2 75
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Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
British Bee Journal...................	3 75..	3 50
The 7 above-named papers.......	8 25 .	7 00

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◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
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C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY.

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
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The prices of Comb Foundation are NOW **advanced two cents per pound** from the quotations in our retail Price List, and **three cents, per pound, at wholesale.**

CHAS. DADANT & SON,
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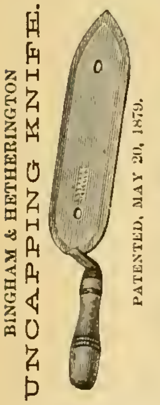
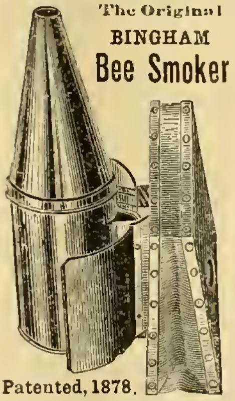
VALUABLE ORIGINAL PATENTS.


BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

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6A2Btf **ABRONIA, MICH.**

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On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

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The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

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Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

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Constitution and By-Laws, for local Associations, **$2** per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JULY 9, 1884. No. 28

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Another Falsehood Exposed.

It will be remembered that Mr. Margrave, on page 424, referred to the statement of a St. Joseph grocer, that he had bought manufactured comb honey of Mr. Twichell, of Kansas City. We invited Mr. T. to reply, and here is what he has sent to us about it:

DEAR EDITOR.—I was somewhat surprised as well as amused in glancing over the BEE JOURNAL, to find, on page 424, an article by Mr. Margrave headed "Manufactured Comb Honey," in which he stated that a St. Joseph grocer told him positively that I had been selling manufactured comb honey, and that I had sold it *as manufactured honey*. Well, I hardly deem it necessary to make a long argument in self-defense on so absurd a charge, because I think that most bee-keepers, like myself and Mr. Margrave, consider the successful imitation of comb honey (except perhaps at a great expense) to be almost an impossibility. I must thank the St. Joe groceryman, however, for this much, that he gave me credit for selling the article for what it was, and not for pure honey, which is but just, for I assure my friends that if I am ever tempted to sell manufactured or adulterated honey of any kind, I will certainly sell it for what it is, and not misrepresent it. But I deny in the most emphatic terms, having ever sold to a St. Joseph merchant, or any one else, any manufactured or adulterated honey, and I am much indebted to Mr. Margrave for his kindly words in my defense. I would be pleased to have the name of the St. Joe groceryman, but do not care for the names of any of the witnesses, as Mr. M.'s word is sufficient.

I guess a good many readers of the BEE JOURNAL have seen my affidavit as to the purity and genuineness of the honey I sell, but I herewith enclose a copy which can be inserted if necessary.

There are a great many persons who can hardly realize the perfection to which bee-culture has risen, and the almost absolute control the apiarist has over the little workers; and when they see a beautiful white, smooth, well-filled section of comb honey, they with the general and wide-spread distrust of everything and every body, hastily pronounce it a fraud. I hear this nearly every day, and I almost lose my temper at times, and want to tell them what I think of people who are so suspicious of every thing. As a rule they need watching themselves. I explain to them as well as I can how comb foundation is made and used, and how that, in a great measure, gives rise to the impression of manufactured honey.

I know no way to overcome this impression except to live it down, and let each of us try to establish a reputation for honesty and pure goods, that when we are assailed in the presence of any who knows us, we can feel sure of a generous defense.

I spare no pains and lose no opportunity of setting people's minds aright on this matter, and also to explain why extracted honey is not necessarily adulterated, because it is so much cheaper than honey in the comb. I enclose a little circular I had printed giving the latter explanation, and I would suggest to Mr. Newman that he get up a plain but brief explanation of how comb foundation is used, and how impossible it is to manufacture and fill the combs in competition with the bees, etc., etc., and place a reasonable price per 1,000 on them to his subscribers, that each may order a few for distribution and publication in as many newspapers as will give it space. This in connection with an honest reputation among honey-producers and dealers will go far toward correcting the evil, and in time, I trust, wipe it out altogether. JEROME TWICHELL.

Kansas City, Mo., July 3, 1884.

The above puts the matter to rest so far as Mr. Twichell is concerned; but it will be only a few days until the scandal-mongers will endeavor to hitch it upon some other person or reassert it as truth, as though it had never been refuted.

Not long ago a person in this city asserted that machinery to make paraffine combs and fill them with glucose were in use at the office of the BEE JOURNAL. The person to whom this "news" was told, was Mr. J. L. Harris, of Wheeler, Ind. As he knew there was not a particle of truth in the assertion—nor anything upon which to found such an idea—he told the scandal-monger he would give him $1,000 if he would show him the machinery, and offered to go to the JOURNAL office with him. Of course this non-plused the "informer" somewhat, but he had no time or inclination to verify his statements. In fact it would spoil a good "story" to be convinced of the contrary.

Concerning the assertions relative to Mr. H. of Linn County, Iowa, Chas. Dadant & Son writes us on July 3, as follows:

We would say on behalf of Mr. H., that he has bought large quantities of honey from us last winter, and that we think if he fed his bees glucose and sold glucosed honey, he certainly would have little desire to buy honey at honey prices.

If it is desired, we will get up another Leaflet on the subject proposed by Mr. Twichell. We will think it over, and others can do so, and if it is demanded, it will be forthcoming.

Mr. Twichell's affidavit is, "That every pound of honey, in any shape, sold by me, is absolutely pure and free from adulteration." Even that, however, is not enough to still the tongue of the slanderer.

◆

☞ Our little grand-child, Maud Newman Cook, died at our residence in Chicago, on July 1, of marasmus. She was a great sufferer, but had a sweet disposition, and bore her agonies heroically. She was buried on Wednesday last in Oak Hill Cemetery, Cedar Rapids, Iowa.

◆

☞ The *Seed Time and Harvest* for July says that "The attractive appearance of the 'Bee-Keepers' Convention Hand-Book' is a sufficient recommendation to any bee-keeper desiring to secure a nice pocket companion."

Seasonable Hints.

Mr. F. L. Dougherty gives the following in the Indiana *Farmer* concerning the present honey crop, and seasonable work in the apiary:

> Delude yourselves as you may with the idea that it is simply a matter of dollars and cents, or so many pounds of honey. There is something in the humming of the bees, returning well laden, that will stir the heart of the most matter-of-fact apiarist.
>
> As we suggested a short time since, a few weeks more would decide the success or failure of the honey crop for 1884. Metaphorically we toss up our hat. The dark cloud has disappeared, the little silver lining has turned into one grand luminous cloud. With us the honey flow is bounteous.
>
> Colonies that have cast a swarm should be examined at intervals that you may know that they have not become queenless. The young queen may have got lost on her bridal trip, and the bees with no brood in the hive from which to rear another will soon become depopulated, dwindle down and fall an easy prey to the moth, which infests all colonies at this season of the year. A safe precaution is to give a frame of eggs and brood to colonies that have cast a swarm, 12 or 14 days after the swarm came out of the parent colony.

Natural Swarming.

The following was translated from the French *Ami du Clerge* for the *Haldimand Advocate*:

> Admire how obedient our little creatures are to the commond of the Creator, "Increase and multiply, and fill the earth." Some of the signs indicating the near approach of a swarm. We are in the full month of June, the sun, according to the beautiful expression of the Holy Scriptures, "hath rejoiced, as a giant, to run the way," vegetation is displaying its choicest colors, flowers are distilling an abundant and ever-renewed honey. Thus broods have matured, families have multiplied, population has increased in most exuberant proportions. Already some drones have made their appearance. Behold some of them flying out in the afternoon to enjoy the ærial outing; that odor of wax you breathe with so much pleasure towards the evening; that vapor which in the early morn bathes the front of your hives; that humming which you hear, dull at first, but day after day more distinct and more pronounced, indicate that the colony is contemplating some extreme measure.
>
> Let everything needed be then under your hand, the hives, the section frames, the water to sprinkle the swarm with. when it ascends in the air, and after it is brought down together. the cloth to preserve it from the ardor of the sun, the smoker and the veil, if needed to protect yourself against the anger of the bees; in a word, have ready at hand all things that may be required for the swarm.
>
> Here are some signs indicating the very near exit of swarms. Do the crowd of bees which were outside the hive enter it again, while those of the other hives remain out? Is the flight of the workers less frequent than usual? Then the swarm is preparing to leave. Or yet, do you notice in front of the hive, towards noon, in considerable group of bees which sensibly increase? Do the bees which return from pasturage, their legs loaded with pellets of pollen, join the crowd, or do they stop astonished on the alighting-board of the hive? Do the bees from the inside rush out to the platform as if to give signal, and do they return immediately? All these signs foretell an imminent departure, (Be ready!) if no obstacle is presented by rain, wind, a great drought; if, on the contrary, the weather is warm and brewing a gentle storm, if the sun shines at intervals, the swarm is also about to leave.
>
> EGRESS OF THE SWARM.—This is one of nature's most exciting spectacles. The order of departure has been communicated to the whole colony. Hear that humming, which increases more and more, and which a bee-keeper knows well how to distinguish from any other sound! It is a swarm which rushes out into the air. The opening of the hive is not large enough, the bees rush forth like an impetuous torrent; it is a general rout; it is surprising how so many bees can come out of a hive in such a haste. The air becomes obscured by them; it is a cloud which moves on, gyrating, interlacing itself in constantly recurring circles. No sooner has the swarm entirely left the hive than it remains for a short time as if suspended in the air, and soon it seeks in the vicinity of the hive a convenient spot to alight on, sheltered from the wind or the burning rays of the sun. Look at it without anxiety, and throw not on it either water or dust, unless it tarries too long to alight, seeming as if it would soar higher in the air and escape. The bees fear water, and come down as soon as it touches them.

Perplexing Beginners.

The following from an exchange shows how some beginners in bee-culture are humbugged by clap-trap hive vendors:

> A few days ago I called at a place not over 100 miles from Indianapolis, where I was shown a colony of bees in an old box. The owner had obtained a good hive, as he supposed, to give the swarm, when it left the old home. This was a box about twice the depth of a one-story Langstroth hive, larger every way, and filled with close-fitting frames about 3 inches wide. The maker of this hive left directions that when the owner wanted to make new swarms, he should simply take out the frame having the "king bee" on, and put it in a new hive and set it off by itself. As I am not in the "bee fixin'" business, I advised the bee-keeper to go and examine some standard hive, and remarked that if I were to step in his shoes as a beginner in bee-culture, I would consider $10 for some standard hive a good bargain, and after all he would very likely have to pay no more for it than the cost of his worthless box.

Fastening Starters in Sections, etc.

Rachel Brown, in the *Home Farm*, remarks as follows:

> I have been putting starters into sections to-day, and tried the method given by S. M. Locke in his *American Apiculturist*, which is: "Take two parts rosin and one part beeswax, and melt them together. To use, take the section in one hand and the foundation in the other. Touch one edge of the strip of foundation into the heated mixture, after which touch it upon the under side of the top of the section to which it will adhere." This is a great improvement over rubbing foundation upon the section, bending it up and waxing with a brush, as we have been in the habit of doing. By this method one minute is sufficient to put in twelve.
>
> I will give you M. H. Berry's remedy for ants about bee-hives: Put gum camphor on the enameled cloth around the edge of the bottom-board, or any place where they are troublesome; they will keep away as long as the scent of the camphor remains.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey," (only 50 cents per 100) or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ Letters for publication must be written on a separate piece of paper from items of business.

CORRESPONDENCE

For the American Bee Journal.

Hiving Swarms of Bees.

W. Z. HUTCHINSON.

My apiary is located in an apple orchard in which there are no limbs that cannot be reached by means of a ladder. My hiving implements are two clothes baskets lined with cotton cloth, and furnished with burlap covers sewed fast at one side. I might remark, parenthetically, that a long basket, like a clothes basket, is better than a round basket for taking down swarms, as the bees often form long clusters lengthwise of the branches. I also have a step-ladder, a pair of heavy pruning shears (with these, small branches can be severed more easily and with less jar than with a knife or saw), a fine-tooth saw for cutting large limbs (I do not often use the saw, as I am opposed to cutting large limbs from the trees). I also use a quart dipper, a fountain pump, two large tin pails, and if the apiary was not located near a small stream, I should add to the above a barrel for holding water.

When a swarm begins to issue, I carry a hive to the stand that I wish the swarm to occupy, and prepare the hive for occupancy. When the bees begin to cluster, I make an examination to see if they are clustering in a favorable location for shaking them into a basket. If they have selected a spot where two or more limbs cross, or small branches are interlaced, I take the shears and clip away some of the branches, and thus secure the cluster in a convenient location for dislodgement.

If the bees are slow in clustering, at a time when more swarms are momentarily expected, I sometimes hasten matters by sprinkling the flying bees, by using the spraying attachment of the pump. When the bees are fairly clustered, I first detach a small portion of them that perhaps are adhering to some small twig, and carry them, still adhering to the twig, and place them at the entrance of the hive, without dislodging them from the twig. These bees at once commence running in and setting up that joyful hum announcing that they have found a home; and when the rest of the swarm is brought and shaken down in front of the hive, this humming at the entrance calls in the swarm at once; while, if the swarm is shaken down without this precaution, a large portion of the bees often take wing, perhaps the queen among the number, before the entrance to the hive is discovered, and the fact announced by joyful humming.

Many of the bees that take wing go back and cluster where they originally clustered, and if the queen takes wing she *may* go with them. If there is no small cluster that can be readily detached, I then dip off a quart of bees from the lower part of the cluster and pour them down at the entrance of the hive. After some of the bees are running in at the entrance of the hive, I hold a basket close under the cluster and shake the bees into it with a quick shake, throw the burlap cover over the basket to prevent any of the bees from leaving, carry the basket to the hive, strike one end of the basket sharply upon the ground 2 or 3 times, which will shake all the bees to one end, and dislodge them from the cover; throw back the cover and shake the bees out upon the ground in front of the hive.

I do not shake them against the front of the hive, as the entrance would at once become clogged; but perhaps 18 inches or 2 feet from the hive. I do not sit right down by the hive and drive the bees in with a smoker, and keep a constant watch that the entrance is not stopped up, but I do go occasionally and see how things are progressing; and, if there is a great mass of bees clustered over the entrance, I poke them away and thus clean the way for another installment of bees to enter.

There is a great difference in swarms as regards the agility with which they will enter the hive. Occasionally there is a laggard that never gets inside the hive until the coolness of night, or till the bee-keeper with a smoker drives it in. If the bees cluster upon a small branch that I am willing to sacrifice, I cut it off and put it with the bees in front of the hive.

The fountain pump is a favorite implement with me. With it and plenty of water it is next to an impossibility for a swarm to abscond. I have had 3 or 4 swarms try to leave, but I compelled them to stay, and in one instance there were no trees near, and they clustered upon so small a shrub that I was obliged to hold it up until they had finished clustering, as it was too small to support their weight.

In controlling a swarm in the air, the spraying attachment should not be used, as the water cannot be thrown far enough; but by using the nozzle attachment, and giving a swinging or sweeping movement to the arm as the stream is thrown, the water is so scattered that it falls in a shower. The pump is also useful in preventing swarms from uniting. Only yesterday I had two swarms issue at the same time from hives only about 20 feet apart; and yet I kept them from uniting, and induced them to cluster in trees several rods apart. I did this by keeping a constant spray of water between the swarms as they came out and circled in the air; and sometimes I almost despaired of accomplishing the object, but I persevered and succeeded.

Among the colonies purchased during last year and this season, were some having queens with clipped wings, and I had more trouble with swarms from their colonies than from those with queens having unclipped wings. If the swarm is not seen the moment it issues, the queen sometimes gets out of the hive and crawls and hops some little distance away, and while looking for her, one is liable to step on her. The bees circle about for a long time, and if another swarm issues they are almost certain to join it. When they do finally decide to return, they sometimes make a mistake and enter the wrong hive or hives; and when they do find the right hive they sometimes cluster all over the outside of it instead of going in. When the queen is released, as the bees are going in, she sometimes comes out again, after having entered the hive, thinking, perhaps, that she has not swarmed; when, of course, the bees follow her. Placing the caged queen at the entrance of the hive aids the bees in finding the hive.

Rogersville, Mich.

* * *

For the American Bee Journal.

Collecting Honey Plants.

CLARENCE M. WEED.

Honey plants are every year becoming of more importance to apiarists; as new portions of the country become settled, and the marshes of older portions are brought into cultivation, the conditions surrounding honey production are much changed. Hence an acquaintance with honey-producing plants is also becoming more important, that all such may be preserved where they are now growing in waste and out-of the-way places, and planted where they are not growing. In view of this, as equally of many other facts, a few directions for collecting and preserving such plants may be of service. As most of the Fair managers now offer premiums for such collections, young people interested in bees and bee-keeping would derive both pleasure and profit from making and exhibiting them.

Whenever possible, collect when the plants are dry; if they are wet, more labor is required and poorer specimens obtained. Where the plants are to be carried some distance, some sort of a tin box is useful in preventing wilting. As a guide to the most important honey-producing plants and time of flowering of each, nothing is better than the list in Prof. Cook's Manual. In all cases where practicable, the fruit as well as the root, or a portion thereof, should be preserved.

DRYING.—For drying, old newspapers will suffice, but thick felt carpet-paper cut into sheets, called driers, 12 by 18 inches, are much preferable. Enough for the purpose can be obtained at any stationers or carpet dealers for a few cents. For holding the plants while drying, a sheet of thin paper, (a newspaper is good), twice the size of the dryers is folded once. These are called specimen sheets, and into them the plants are placed as soon as possible after being gathered. Between each specimen sheet 2 or 3 driers are placed, and over the whole a heavy weight transmits pressure through a board slightly larger than the driers. For a weight nothing is better than a stone weighing from 20 to 40 pounds. For very tender plants less weight should be used than for hardier ones.

Twenty-four hours after the plants are put into the press, they should be looked at, and wherever a leaf or flower is out of place, it should be placed naturally; as the plants are in a sort of wilting condition, this is easily done. At this time, also, the driers should be removed and others substituted, placing those taken out in where they will dry. This operation is repeated every day for one or two weeks, when the plants will usually be dry. This is told by placing the plant against the cheek, if it feels cold it is not yet dry.

Where very fine specimens are desired with the natural colors preserved, heated driers should be used and replaced two or three times a day. By this method I have produced specimens which rival in beauty of form and color the fresh unplucked flowers of fields and woods.

After the plants are dry they may be kept in the specimen sheets an indefinite length of time, or until they are to be mounted. For mounting either for exhibition or for private purposes, I use heavy book paper cut 11¼x16½ inches, this is the size used by botanists for herbariums. They cost about 2 cents per sheet. There are two methods of attaching specimens to the sheet, either by gluing small strips of paper over different portions of the plant, or by gluing it bodily to the sheet. For exhibition the latter method is much to be preferred. Any strong, light-colored mucilage will suffice. I have used with good results a solution of gum-arabic.

As dried plants are liable to insect attacks, they must be poisoned. This process is very simple; apply a saturated solution of corrosive sublimate in alcohol by means of a camel's-hair brush to all parts of the plant.

For the American Bee Journal.

Tree-Trunk Method of Wintering Bees on the Summer Stands.

WM. F. CLARKE.

This is a somewhat pompous and lengthy title for an article, I must admit, and a modest blush mantles my cheek as I read it. But there is no use in giving a small name to a big idea, which I firmly believe the one I have struck to be. For several years it has been impressed upon my mind that I should some day make

A GREAT DISCOVERY IN BEE-KEEPING

Mr. Heddon sarcastically twitted me on this point in one of his articles in the BEE JOURNAL, but it must have been a species of mind-reading on his part, for I never told any body my dream of becoming a discoverer. But I did not deny "the soft impeachment" on Mr. Heddon's part, because I inwardly felt that it would yet become true. I find it very difficult to write with that calm dignity and equanimity which befit a literary man. In fact, my hand quivers with a tremulous excitement, so that, as the Editor can plainly see, I do not write with my usual steady chirography. I feel somewhat as Galileo did when the true theory of the universe dawned upon him, and my fellow bee-keepers must bear with me if I "blow off steam" a little at the start. To quote Puck's motto, "What fools we mortals be!" Or to make a more original remark, "Why did nobody think of this before!" It seems to me so simple and self-evident, that I am afraid somebody will yet get it before the apicultural world before I do! Life is too short, and I am too impetuous to wait two or three seasons and experiment. I must take the whole bee-keeping fraternity into my confidence, and ask each one to test the method I am about to develop, with one colony. This is a small request, and I think my brothers and sisters in apiculture will not refuse compliance with it.

PREVALENT MODES OF WINTERING BEES.

I have tried every known plan of wintering except the clamp and coal-oil-stove methods. After the disastrous experiences of Messrs. Hutchinson and Doolittle, I do not feel disposed to waste time in trying these, particularly as I feel sure I have found "a more excellent way." For myself, I must own I am not satisfied with any of the modes of wintering now in vogue. Every season the question comes up, which of them all I shall venture to adopt the coming winter. All are more or less haunted by risk and uncertainty. All result in loss, at least now and then, sometimes in very severe and crippling loss. I have felt until now, and the majority of experienced bee-keepers have felt with me, that the true mode of wintering bees has been an undiscovered secret.

A QUESTION.

In my young days, I helped clear many acres of timber land, and never felled a tree, nor heard of one being felled, that gave evidence of a colony of bees having been winter-killed in it. I would ask bee-keepers all over this broad continent if they ever saw or heard of a colony of bees being winter-killed that had its home in a hollow tree? The fact that bees winter well in hollow-tree trunks was the vein that revealed to me what I believe will prove a gold-mine to bee-keepers. "There's millions in it" of live bees, yet to be saved from perishing through the ignorance and stupidity of that very wise being called "man."

NATURE'S METHODS.

Without raising that vexed question in theology, whether nature's laws are the *dicta* of an all-regulating mind, which would bring Mr. Heddon and others after me with a sharp stick, I will simply lay down the position that the closer we can adhere to nature in our artificial arrangements, the more likely we shall be to come out right. Well, have we observed this principle in the construction and location of bee-hives? Not much. When did a colony of bees ever voluntarily make its home in a dark, damp cellar, or a gloomy, close-pent bee-house? Or in a box or other receptacle close to the cold, damp ground? Who invented the plan of setting hives close to the surface of the earth? Where is the practical benefit of so doing? Almost the only argument in its favor I know of is, that bees, laden with honey, are apt to miss the hive and fall to the ground. But I believe more bees are gobbled up by toads in consequence of the hive's near proximity to the ground than are ever lost by having them higher up. Undeniably nature's method is to give the bee a home suspended in mid-air, away up from the damp, heavy vapors that always settle down to the earth's surface. It is man who forces this insect to live among reptiles, toads and worms, when it was made to be the companion of birds and squirrels in the tree-tops. I have arrived at the conclusion that most of our troubles in regard to wintering arise out of the absurd attempt to make a denizen of the air become a dweller on the ground.

BEE-LIFE IN A TREE-TOP.

What are the characteristics of the bee's natural home? Elevation above the damp, foul gases that by the law of gravitation sink to the surface of the earth. In winter, an abundant supply of *still air;* a long shaft of hollowness, so to speak; a crevice or opening usually some way up that shaft, and not far from the bee-nest; no upward ventilation; provision for dead bees falling away down low enough not to pollute the home of the living with their dead carcasses; and the natural gradual change of air which takes place in a long atmospheric column. We violate nearly, if not quite all these conditions in our prevailing modes of wintering bees. Is a cellar or bee-house a good place for a human being to live in? The respiratory organs of the bee are probably as sensitive as those of a human being. Tough specimens of men and women have made out to live in wretched underground bastiles for months and years, but if people in general were doomed to inhabit such places, there would probably be as much mortality among them as there is often among bees in cellars, bee-houses and earth-clamps. In the tree-top, air is filtered to the bees through a long air-shaft, the outer crevice, and by means of ventilating processes which these insects understand how and when to apply; but our customary methods give them unfiltered and foul air, often in very small proportions, and in manner that prevents their employing their own instincts in the way of artificial ventilation. More or less old bees usually die in the course of the winter. Their dead bodies lie on the bottom-board not far from their living companions. It is as though we had a corpse or two in the first story of our houses, got the diarrhœa from the bad smell, and then attributed it to the family eating oatmeal or buckwheat cakes! How delicate is the sense of smell in bees!

Can we suppose that a lot of dead bees can remain close to the frames on which the colony is clustered, and not poison them with foul odor? Finally, our methods go on the principles of securing a uniform temperature, which does not obtain in nature, but is one of man's so-called *improvements*. There is no evidence that bees are not the better for having a change now and then, if gradually brought about, by means under their own control.

HIBERNATION OF BEES.

It is generally admitted that bees hibernate; that is, go off into a state of torpor or semi-torpor, when they winter under purely natural conditions. There are differences of opinion among scientific men and practical bee-keepers as to the nature and extent of this process in the case of bees. I cannot now discuss this point at any length, but will simply say that hibernation is to a considerable extent, if not wholly, prevented by our customary methods of wintering. Among hibernating animals and insects, there is a difference of habit. The bear goes into winter quarters fat, sleeps during the cold weather, and wakes lean in the spring. His excess of adipose matter has kept him alive without eating. The squirrel and other creatures that lay in a stock of food, have several spells of torpidity during the winter, out of which they awake at the touch of warm weather, to eat. Bees are like squirrels rather than bears. They do not become fat in the fall, and sleep themselves lean, but have short terms of torpidity, out of which they awake in mild weather and take a feed. Then as the mercury goes down, they yield to drowsiness again. A little reflection will show that the tree-top conditions are favorable to the hibernation of the bee, but cellars, bee-houses clamps, and chaff-packed hives are not. They go on the principle of one uniform temperature as nearly as possible all winter. If that temperature is too warm, the bees do not go to sleep at all, but become restless, eat lots of honey, foul the hive, many old bees die, and get up what Mrs. Partington called "an antagion," and so forth. If the temperature is too low, they get cold victuals—icy honey, frozen pollen, etc., and why should not such food give a bee the colic and diarrhœa as well as human beings? Mark this, that the bee to winter naturally, must be able to take *hibernating spells;* not one, long sleep, nor one long wake, either of which will be injurious if not fatal.

MY PLAN OF WINTERING.

There is very much more to be said in the way of general discussion of points connected with the central idea, but I must simply state it, and close for the present. In brief, then, I go for the hollow tree-trunk plan of wintering; not literally, for that of course is out of the question, but the *nearest approximation to it that can be got*. If I had a flat-roofed building, which I have not, I would set my experimental hive on that, and have a long hollow tube connected with the hive by a hopper, and extending to within a foot or two of the ground. That I should consider a fair way of testing the theory, I have set forth; and if any bee-keeper has the chance of trying it thus, it would be well to do so. But "I have faith to believe" the thing will work without going so high up into the air, and have just completed a hive-stand embodying the principle set forth in this article. It consists of a box about table high; just the height at which you can handle bees without hurting your back. The bottom of the box is one wide board 1½ inches thick, 20x26 inches; the dimensions calculated for a Langstroth hive. The box is tight with the exception of four auger holes covered with wire gauze, which are made within 6 inches of the top. The extra size of the box is meant to afford an opportunity to cover the hive with a rough shelf in winter, and if desired, pack with chaff. I also gives a wide alighting board in front, and some shelving on the sides, and at the rear, which will be found handy during the working season. The hive to be used is without a bottom-board, but a sliding bottom-board, put in and taken out from the rear, is to be used during the honey harvest. When that is over, and all danger of comb extension is past, it is to be removed. Immediately below it is a hopper fitting tightly to the stand just beneath the hive, its flaring sides terminating in a square tube 4 inches wide each way inside, which reaches to within a few inches of the bottom of the box. The usual entrance to the hive is to be left open. Through it and through the auger holes on the four sides of the box, abundance of air will find its way into the hive. Its dead bees will choke the entrance, as they will fall to the bottom of the box. A little door in the box enables the bee-keeper to see the dead bees, dry excrement, etc., that may have dropped from above, and thus the state of the colony can be judged at a glance to the extent that these signs reveal it.

It will perhaps be asked, why not have a skeleton stand with merely the hopper and tube reaching to within a few inches of the ground? I answer, because it would not so nearly fulfill the conditions of tree-trunk wintering. My box gives me a reservoir of still air obtained 2 feet or more from the ground, and, being tight, cuts off dampness and excludes foul gases. It should be added, that the bottom-board of the box is spiked to pieces of cedar pole slightly flattened on the lower side, giving the least possible contact of the box with its round sills. My idea is now roughly out-lined, and the practical use of it will doubtless be improved upon by others whose inventive genius in that line is greater than mine.

Speedside, Ont.

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed).

N. P. ALLEN, *Sec.*

For the American Bee Journal.

Reversible Frames.

J. E. POND, JR.

Are reversible frames of any real practical value, or at least sufficiently so to pay for the trouble in fitting them up so that they can be made of use? When they were first mentioned, the idea struck me as being one of value, and theoretically it is, but it proves with me to be one of those theories that after all are of no real practical value, and for the simple reason that I find I can accomplish the same results without them, in a far more simple and easy manner than I can by going to the trouble and expense of fitting up for their use.

Again, the points of superiority claimed for them are really more a matter of fancy than of real utility. Perhaps in a poor season, or at a time when honey is coming in slowly, frames may be found to be filled more completely by reversing than by allowing them to remain in their usual position; but it is to be hoped that at such times, the prudent and economical apiarist will be enabled by regular feeding in small quantities, to cause his frames to be well filled out, and while doing this, stimulate his colonies sufficiently to keep the cells filled with brood; and thus, as the old saying is, "kill two birds with one stone."

One of the chief points of superiority claimed by the advocates of reversible frames is, that by the process of reversing, the cells are filled with brood close up to the top-bars, and the bees will then more readily enter into the sections. I am aware, and have been for years, that bees deposit their stores above the brood, and have made good use of the extractor to cause them to go into sections, when I got ready to place them on the colony. I have found also that extracting stimulated brood rearing precisely as does feeding, and that when I extract the honey stored in the upper parts of the frames, the queen will deposit her eggs in the cells from which the honey is extracted, and the bees will at once occupy the sections and begin storing therein.

When a flow of honey is coming in from the fields, there is no trouble at all in getting frames well filled out, and sections well filled out also, if care is taken to provide the proper facilities. Those who claim that the instinct of the bee is all-wise, and allow it to work its sweet will, must fall far behind in the race, with him who uses his reason in directing (not forcing) that instinct to work for his own advantage. If the extractor could be used for no other purpose than simply giving the queen room to deposit her eggs in the location desired by the owner, it would well pay for itself in a very small apiary; and with myself, after a fair trial, I find it will do so much more easily, simply and cheaply than can be done by any arrangement I have yet seen or heard of in the way of reversing or reversible frames.

I speak only for myself; others may view the matter differently; but my candid opinion is, that reversible frames, like many other new things, will soon be laid away as cumbersome, troublesome, and not sufficiently valuable to pay for the time needed to operate them.

The idea of reversible frames may prove a profitable speculation to the supply dealer for a short time, but no one else, in my opinion, will ever realize any profit from them. Let those who may choose, test them if they like, but as for me I want no more of them.

Foxboro, Mass.

◆

For the American Bee Journal.

Comb Honey-Rack Again.

JOHN HODGSON, JR.

I send you another engraving of my honey-rack with description and improvements, as the former cut and

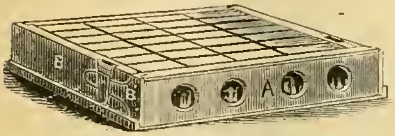

FIG. 1.—*Rack with side closed.*

description given on page 96 of the BEE JOURNAL for 1883 did not give a correct idea of the rack. This second mention of it is due to many who have been making a multitude of inquiries about this rack, and other honey-racks.

Figure 1 represents a closed rack with a honey-board with slats (which can be made any width to suit the width of sections used), and with a full set of sections in place. The portable side A is held in its place by the V-shaped beveled wedges B B. The section-board C in Fig. 2 is intended to take the place of a row of sections, when it is necessary to have the bees work in only a part of a set; and when there is a shortening up in the honey flow, then one or more of these boards can be used.

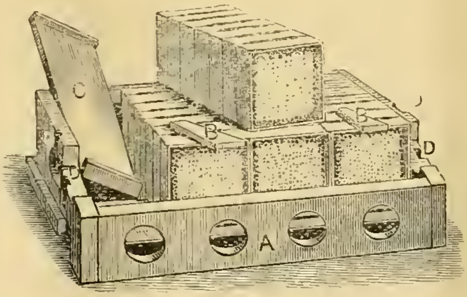

FIG. 2.—*Rack with side opened.*

Figure 2 shows a rack with the wedges B B removed, the portable side A loose, and the section space open to remove from or fill with sections as the case may be. The wedges B B are of great advantage in case of the sections swelling or shrinking, as the side A can be let out or drawn up 3-16 of an inch by loosening or tightening the wedges.

The row of sections on the top, in Fig. 2, are full and removed, and the section-board C is being put in their place. This cut and the description given above will enable any one, by careful examination, to understand this rack.

Pewaukee, Wis.

◆

Read at Arcadia Farmers' Convention.

Bee-Keeping for Profit.

E. A. MORGAN.

There are very many works treating upon this subject, which are more or less a help to the beginner; but what I have learned is by experience, and in many instances it has been dearly bought. To succeed in this business, a person must first understand the natural laws governing the honey-bee. He can then tell at a glance what should be done to promote their best interests. For as Josh Billings says, "A bee is sudden in his impressions, and hasty in his conclusions." It is therefore very necessary to do what you do, just at the right time, to secure the best results.

Many farmers in this vicinity have tried bee-keeping from time to time, and are satisfied that it is very profitable, and while all was favorable they made it pay well, but sooner or later something turned up which they did not understand, and all were lost.

In bee-keeping, as in all other pursuits, it is all important to make a good beginning; and to do this, it is as important to get good stock as it is with your cattle, horses, or hogs. Having obtained this, next in importance is a thoroughly practical hive. And in bee-keeping for profit, it is necessary that the main feature of the hive should be simplicity, which would at once exclude doors, drawers, and traps of all kinds. The combs should be movable, so that the operator can, in a moment's time, remove any or all of them to another hive if necessary, which is often the case in spring when clogged up with dead bees or dirt. All hives and frames should be alike, and the frames interchangeable, which is very necessary in feeding, in strengthening weak colonies from strong ones, in extracting, in queen-rearing, and in many other things. For this climate I would recommend the Langstroth hive, holding 10 frames or brood combs, which, being shallow and open at the top, admits of the bees going directly into the surplus boxes from the main hive; and being directly above their brood, they receive the heat of the cluster, which is very essential, especially in cool weather, to aid them in manipulating wax. This hive can be made to accommodate any sized colony by the use of a close-fitting movable division-board. This hive is not too large nor too small, and will receive surplus receptacles for 50 pounds of honey, and can be tiered up to any height desired. It is not, however, the best out-door wintering hive, on account of its shallowness. Bees in this hive require some sort of winter protection; but when we figure its advantage as a summer hive, above the cumbersome and costly out-door wintering hive, we can well afford to pay the difference of winter preparation required for this hive.

Just a word about boxing for surplus honey. Many beginners and inexperienced bee-keepers constantly encounter difficulties in first getting their bees to go up into the boxes; and after the first set of boxes have been filled, much valuable time is often lost in finishing and capping the sections, and getting the bees to begin anew in other boxes; and not unfrequently a strong colony will send out a new swarm in preference to making a beginning in new boxes, which, of course, is very ruinous to their owner. In short, the profit of the apiary, where it is run for surplus, is governed largely or wholly by the amount of box or section honey stored, and this depends entirely upon the readiness with which bees can be made to work in boxes. Since the time in which bees store surplus honey is divided into short seasons during the summer, known as honey flows, it is all important that the bee-keeper has his colonies in condition to "improve every shining hour" to the best advantage, as these honey flows are sometimes "few and far between. My plan of boxing is to use foundation starters in all sections, and put on but one crate at a time, as it is not difficult to induce bees to work in one crate, where it would be impossible to start them in three or four. When one crate is about half filled, put on another, and so on until the frames are covered, making it a rule to take off the first crate of honey before the last empty box is put on, so that but one filled crate is taken off and one empty crate put on at any one time, thus avoiding the necessity of much sudden change, and removing the difficulty of starting bees in a full new set of boxes. This process of rotation, if carefully adhered to, will sometimes save hundreds of pounds of honey to an ordinary bee-keeper, in one season. One more suggestion on this point. Arrange your crates so that the sections will run parallel with the brood-frames, thus giving the bees a free passage into the boxes, and not merely a small square hole, as is the case when they are placed at right angles, which is often the cause of much delay and tardiness in getting bees to work in boxes. . . . .

Had my paper been on the "Honey-Bee," I could doubtless have made it more interesting than on keeping bees for profit; but will say this much for the bee or race of bees to be kept for profit: that after having tried several races, I am decidedly in favor of the Italians, for the following reasons: 1. They possess longer tongues, and can, consequently, gather from flowers which are useless to the black bee. 2. They are more active, and with the same opportunities, will gather much more honey. 3. They work earlier and later, not only of the day, but of the season. 4. They are far better to protect their hives against robber bees. Bees which attempt to rob Italians of their stores, soon find that they have "dared to beard the lion in his den." 5. They are proof against moth millers. 6. The queens are far more prolific, and breed up faster in the spring. 7. The Italian bee is more hardy, longer lived, and stronger of wing than other breeds. 8. And lastly, they are more amiable. A stock of pure Italians may be handled without the least danger of stings.

And now I will close by speaking of their advantage to the farmer, other than by supplying his table with honey, and filling his pocket with money. All bees feed exclusively upon saccharine juices or nectar of flowers, called honey, and the food of their young in the larval state, is the pollen of flowers, called bee-bread.

The honey-bee was not only created to gather the nectar from each opening flower, and store it in shape for food and medicine for mankind, but at the same time there was a double purpose intended. They were made to perform a very important part in the economy of nature—that of the fertilization of flowers, which depends upon the contact of the pollen with the stigma; and, as if to secure this object more perfectly, in their search for honey and pollen, they pass from flower to flower of the same kind, and are never known to visit two varieties of flowers on the same trip, as many have supposed. It is indeed wonderful how so small an insect can be made to do so great a work, and governed by natural laws. they become most populous at the season of the year when most needed in this work It is estimated that not more than one-half of the blossoms on our fruit trees would bear fruit, were it not for this agency. The bee, eager for the nectar secreted in the flower, plunges into the blossom, covering himself with its pollen dust, and thence to the next, scattering it there, and so on.

When we realize that in a strong working colony there are 50,000 of these workers, and that each one makes hundreds of trips each day, we can readily see how much may be accomplished in one day's time. And it is indeed possible that the nectar there secreted was for the sole object of attracting the insects thither, that they might accomplish this work.

Farmers are becoming more acquainted with these facts, and it is very noticeable that in sections where many bees are kept, the fruit crop is more abundant, and the clover yields far more seed. Only a short time since I saw an article on the transportation of bees to Australia, where the clover has never been known to bear seed. Some one suggested that bees might be made to distribute the pollen.

The experiment was tried, and it is reported that in the vicinity where the bees were stationed, the clover, the present season, has borne seed, thus proving conclusively that their work alone wrought the change.

For the American Bee Journal.

Reply to W. F. Clarke.

JAMES HEDDON.

I shall have to ask my old friend, Mr. Clarke, to excuse me for not taking a firmer "hold" of him in the "Priority of Location" controversy. If he will not again blame me for "taffying" him, I will say that it is very difficult for me, or any other apicultural writer, to keep a "good square hold" of him when we cross the swords of sharp sarcasm; and as far as the philosophy of the subject at issue was concerned, truly I did not discover much to get "hold" of.

As sharp and pointed as Mr. Clarke takes hold of me, he is not faultless in his logic, nor correct in his assertions. Because I am, the present season, increasing the stock of my field, is not "an admission that I have underrated it in the past," or that the field is in any way improved. I am doing this to put to test the results and standard of overstocking in this locality. Regarding the elegant and classical caption of Mr. Clarke's article, I have only to say that Mr. Clarke has mis-applied it. I need no "burrow." I will try to prove my claims. I feel that time and experience will assist me.

I do not say that no one can form a correct conclusion regarding any point in apiculture who is only an apicultural dabbler, but I do say this, that being only a dabbler is the mantle that practical producers throw over the heads of those who almost always get the impractical theory side of such subjects.

I think Mr. Clarke is mistaken, and I imagine that more than nine-tenths of the honey-producers of this country think that he is mistaken. He can convince me that he will not "always be in error on this subject," when either he or I see our mistake.

Mr. Clarke's comparison in his last paragraph is entirely unfair. Why could he not compare my position in the science of apiculture with a similar position of some one in another science? Why could he not have said, if Mr. Heddon says that editing a daily newspaper is not labor; is only just child's play; that dull, prosy items take as well as sharp and spicy ones, he is mistaken, and nothing will set him right, but to depend upon holding such a position for the bread and butter of his family. "In the realm of the unknown (and that intellectual giant, Herbert Spencer, says, 'possibly the unknowable'), ALL have an equal right to guess."

No doubt the "Priority of Location" subject has gone its normal length. Mr. Pond is reduced to one stale law-point. Mr. Kendall appreciates anew the old law of logic, viz: Never back up a strong point with a weaker one, for an opponent will cunningly attack the weaker one, entirely ignoring the one he cannot answer.

Dowagiac, Mich.

Pacific Rural Press.

Marketing Extracted Honey.

WM. MUTH-RASMUSSEN.

A paper published in Los Angeles, *News and Recreation*, contains an article complaining of the unjust and exorbitant tare exacted from honey-producers. Not only the weight of the cases, but also that of the cans, including the weight of what honey adheres to the inside of the can after it is emptied, is deducted from the gross weight. The same cans are frequently returned to the bee-keeper, who has to pay for them over again, besides cleaning them and paying the return freight charges. While I have suffered from this extortion myself, and admit that there is just cause for complaint, I cannot help feeling that the bee-keepers themselves are in a great measure to blame for this state of affairs. Finding that new cans, made to order in the tin-shops, were too expensive, they adopted second-hand coal-oil cans, which, after being properly cleaned, might do well enough for manufacturers and other large consumers of honey, but were unsuitable for the retail trade. Aside from the more or less founded objection to the previous use of these cans, very few customers will buy such a quantity of honey at one time. This same objection, being once fixed in the public mind, will be slow to disappear, even if entirely new cans should be used for the purpose, particularly if the new cans retain the same size and shape as the old coal-oil cans. The consequence is, that a new trade has sprung up, whose business it is to place the honey before the public in smaller and more attractive packages, without which there would hardly be any sale for honey at all.

Producers of comb honey have long ago taken the matter into their own hands, and thereby remedied the evil of too much tare. None of them would now think of placing whole caps of honey, built irregularly through the frames, on the market. The popular one and two-pound sections are sold with the honey; the sections are so light that nobody objects to paying for them, while the producer gets his money back and really loses nothing by buying the sections. If all producers of extracted honey would insist on being allowed the actual cost of the cans, including purchase price, freight charges and cost of cleaning and repairing them (without talking about selling the cans by weight at the same price as the honey), and would agree not to sell any honey unless this demand was complied with, they *might* accomplish their object, although I well know that it is very difficult, if not impossible, to get a large body of men, competing with, and more or less jealous of each other, to sign such an agreement; and without concerted action it would be useless to try this remedy.

But there is, in my opinion, a better way of doing it. Producers of preserved fruit, meats, fish and other canned goods, as well as of wine, tobacco and many other articles which enter into the daily consumption of the public, do not place their wares on the market in bulk. True, some of the articles are re-handled by packing firms, but many of them are put up in retail packages by the producers themselves. Why cannot the bee-men do the same? They have a large amount of leisure time during the winter which might be well employed in making cans. They are all used to handling the soldering iron, and, with a little practice, can do such work as well as a professional tinner. Material in the flat can be procured at one-half the cost of ready-made cans, and, considering the small bulk, at much less freight. For sealing-wax, made of equal parts of rosin and beeswax, with which to close the cans, they have one-half the material at home and do not need to buy it.

I will give a little of my own experience when I first settled in this part of the State. I put most of my honey up in new ten-pound, screw-top cans, charging 25 cents extra for each can, as the actual cost of the cans laid down here. I never heard any complaint of this extra charge, as I advertised that customers might bring their own vessels, and thus avoid paying for the can. But after awhile the honey would granulate, and some would object to the trouble of melting it, or the difficulty of getting the liquid, but thick honey out of the can in cold weather, while others who preferred the candied honey, disliked cutting the can and thereby spoiling it for future use. To obviate this trouble I adopted the "Jones' honey cans," made like ordinary fruit cans, having a large cover which can be secured with sealing wax. As before, I charge the cost of the cans, get fair wages for my time and work in putting them up, and obtain a living price for my honey. As the cans, after being emptied, are useful for preserving fruit, and for many other purposes, nobody objects to paying for them. The handsome labels, with which the cans are adorned, no doubt help the sales considerably, and my name and address on the label are a guarantee that the contents are as represented, and not adulterated. Some may put up honey in irregular sizes of second-hand, picked-up cans, and a certain class of customers will buy them, thinking that—the contents being the same—it does not matter about the style of the can, if they can get it a little cheaper. But the majority will insist upon having my honey, because the irregular style and size of the package assure them that they get what they pay for.

The sizes, which I have found most suitable for the retail trade, are 2½ and 5-pound cans, the difference in favor of either being almost imperceptible. I have shipped such cans in cases holding a dozen of the former, or one-half dozen of the latter, by team, rail and pack-animals, without any loss by breakage or leakage; and, as the honey always granulates here in the fall, there would be no danger, even if the sealing-wax should get broken. For home storage, or when short of small cans, I use 60-pound cans, but never sell any unless ordered or called for at the apiary. If the bee-keepers as a class would follow my example, I am sure they would have the same experience to the mutual satisfaction of themselves and the public at large. Let them once agree to use a few standard sizes of small packages, and, when found suitable for their market, forever after strictly adhere to them, and I have no doubt that they will wonder at and regret that they did not try it long ago, and thereby establish a good reputation, a lively demand and a fair price for the honey.

Independence, Cal.

Norfolk, Ont., Convention.

The 14th regular meeting of the above association was held in Simcoe, Ont., on June 7. The 1st Vice-President, Mr. Moses A. Kitchen, in the chair. The minutes of the last meeting were read and adopted.

Questions were answered as follows:

1. Which is the better for bees, during the time of breeding, honey or pollen? After a full discussion, it was decided that both are absolutely necessary.

2. What is the cause of so many bees leaving their hive in the spring? There are various causes; but the principle one is a need of supplies.

3. When a colony finds itself queenless, and then rears a queen of its own, is it advisable to leave this queen with the colony? No; for when the bees find that they are without a queen, they are sure to set about rearing one from a larva already 8 or 9 days old, and which has previously received no special nourishment; and the result is sure to be an imperfectly-developed queen.

The next question that came before the association, was one concerning adulterated honey. Some one had said that a bee-keeper had placed adulterated honey on the market. A sample of the article being produced, was examined by experts, and pronounced to be unadulterated, but of an inferior quality; having been gathered late in the season, and not properly ripened.

After discussing other matters, the meeting adjourned to meet at 2 p. m. on Saturday, Sept. 6, at the residence of Mr. Moses A. Kitchen, on the gravel road between Bloomsburg and Waterford. All are cordially invited to attend. ELIAS CLOUSE, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

How to Clean Barrels for Honey.

I have some barrels to clean, and I have been trying to clean them with hot water, but I cannot get the smell out of them. Would whisky barrels need to be free from smell so as not to injure honey? Can wine barrels or other barrels be cleaned through the bung-hole so as not to sour or taste the honey? The spring has been very poor for bees in this part of the land. We had a very heavy frost and killed all the fruit bloom. Bees wintered well here last winte. GEO. KEMP.

Navan, Ont.

ANSWER.—Yes; hot water persistently used will cleanse your barrels fit for honey.

Why do the Bees do so?

On the 19th we had a swarm from one of our hives, and on the 26th we cut out all the queen-cells but one; to-day the bees acted, for quite awhile, as if they were going to swarm, flying in and out of the hive, making quite a noise. Please tell me the cause of this commotion. A NOVICE.

Jerseyville, Ill., June 30, 1884.

ANSWER.—I think that you must have left a second cell, or else the bees concluded that they must have one, and thought of swarming with the queen that hatched.

Swarming Fever.

Bees are now working lively on white clover, of which we have an abundance. Where allowed to swarm they are making good use of it. One of my neighbors had one colony that swarmed and returned five times, having been hived 2 or 3 times. The owner is a beginner in bee-keeping, and did not understand how to manage them to save such trouble. I was there the other morning, and they were hanging out in abundance. I told him if the queen could be found the colony could be divided so as to make it the same as if it had done its own swarming. So we went at it and found a mystery that I would like to to have solved. We found plenty of queen-cells in different stages of development, but could find no queen, and the age of the brood showed that there had been no laying queen for 4 or 5 days, for there was no eggs nor fresh hatched larvæ. It had swarmed the day before, and I believe every day preceding for 5 days. So we divided it by making a division of the bees, giving each part some queen-cells, supposing the queen was lost. But to our surprise, the next day, the part that contained the greater part of the bees swarmed again; it being the part that was set away, and the part that we supposed contained the queen, if there was any, as we brushed the most of the bees into that part and gave it two combs with 2 or 3 queen-cells. There was no indication that any young queen had hatched out. Now, what I wish to know is, will a queen cease laying during a swarming fever? He had another that had been out and returned. This we divided also, but did not find the queen, but found eggs and brood in all stages. So we divided it on the common rule, by putting in a comb of brood in the new hive on the old stand, brushing the bees into the new hive and setting the old hive in another place. This one is doing all right. J. W. SANDERS.

Le Grand, Iowa, June 25, 1884.

ANSWER.—Yes; we have known such cases, where just as soon as the efforts at swarming began, the queen ceased to lay, and was undoubtedly the condition of affairs in the case you mention.

Maltine.

Have American bee-keepers made any trial of maltine (or extract of malt) to feed the bees, with honey, as a remedy for the so-called diarrhœa? If not, I would recommend it. I think it is worthy of a trial, and would prove of service if "the pollen theory" be correct.

A NEW ZEALAND BEE-KEEPER.

Pukekohe, N. Z., May 26, 1884.

ANSWER.—I know of no one who has ever tried maltine, nor can I understand how it can assist us in preventing diarrhœa among our bees, whether "the pollen theory" be correct or not. The latter theory is based upon the idea that nitrogenous food should be avoided in winter, and I should suppose that maltine would rank higher than honey as such food, and thus tend to increase rather than decrease the tendency towards the disease.

Tiering up Sections.

I have a very strong colony of bees. I have 8 frames in the brood-nest, and two tiers of sections; 42 sections in both. They are clustering in front of the hive, very much. I thought they were about to swarm, so I looked for queen-cells, and there was not one started. The top tier of sections are almost finished, but not quite ready to take of. The under tier is ready to cap. Should I give them another tier or not, as white clover is drying out on account of the drouth? If I should give them another tier, and the flow of honey is getting poor, will they finish the upper tiers or not? I have no experience, or I would not ask such a question, but it is of importance to me, as I want to get all the salable honey I can. S. M. HICKEN.

Dell City, Del.

ANSWER.—This question hits a vital point, and is one that may well be asked by the inexperienced. You seem to have about the right idea of it. If you had, as we have, a basswood crop just opening, you should put on a third case, because you could not afford to lose a case of honey to get another finished a little sooner; but the lying out of your bees, indicates one of two conditions, viz: that either your hive communications are faulty, and your bees exposed to the direct rays of the sun, or else that the flow is drying up. Supposing the latter to be the case, just leave the cases as they are until finished, or another flow begins. Take them off as soon as finished.

Candied Honey in Kegs.

How is honey handled after it is candied, to put up in pails and cans? My idea is to cut it out of the kegs and put in a double boiler and liquefy it, then run it in the jars, pails, etc. Is that right? I am going to try and build up a trade on extracted honey, and as we have a city of over 15,000, I think I ought to sell large quantities of it. R. B. HOLBROOK.

Winona, Minn.

ANSWER.—The better plan is to draw it into the cans just before candying takes place. If too late for that, I would place the candied honey in a warm room to soften just enough to settle down compact into the pails or cans.

Wax Production.

Most of us now use comb foundation to save bees the labor of wax building. But in the market wax seems to be more valuable than honey. Would it not be possible to invert the process, and by supplying the bees with honey and rye flour for pollen, and denying them comb foundation to induce them to concentrate their energies exclusively to the production of wax? W. H. BARLOW.

Charlottesville, Va.

ANSWER.—As I understand it, the use of comb foundation not only as a perfect guide to straight combs, but in full sheets as a guide to all worker cells, and a material of economy, paid all through the season of 1883. It is no dearer in price this season. My idea is that it pays me well now. I am, the present season, using nearly one thousand dollars worth. I am of the opinion that I am gaining by so doing. I know that honey may run down so low that this material can hardly be afforded in full sheets; but it has not, as yet. I do not believe that we can ever produce wax at a profit at any price it is likely to go to.

Honey Candying, etc.

I find the bees in this county in fine condition, and gathering plenty of honey. I transferred one colony, and they filled 3 frames and put about 10 pounds in the boxes in 5 days. I found in two places where bees are putting candied honey in their new combs; it seems that it candies as they gather it. What do they get it from? I sold some of my first honey in one-pound sections for 20 cents each, this year. We had a heavy honey dew this year. What credit should a queen have for cells taken from her hive, on the Apiary Register? I have one colony that I have reared 8 from. I take the frames out that have the cells on them.

H. C. AUSTIN.

Austin's Springs, Tenn., June 27.

ANSWER.—I am unable to say, not knowing much about your Southern plants. We all know that honey from some sources candies almost as soon as stored. It is further true, that in this respect, honey from the same plants varies in different seasons.

Regarding the credit you should give the colony you take cells and combs from, your own judgment as to the force you deprive them of should be best.

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Bee-Keeping in New York.

I had 12 colonies of bees last fall, and wintered 10. I have had eight swarms which are in 7 hives, and doing well. They are gathering honey from white clover and Alsike. The yield from Alsike seems to be abundant. Farmers are sowing Alsike quite extensively now, which is fine for bee-pasturage. The spring was wet and cold until in May, since that time it has been growing warmer until now it is dry and the air sultry. Although my bees have plenty of shade, I have covered the hives with boards to protect them from the heat. The thermometer indicated 92° in the shade at 2 p. m. to-day.

WM. A. BRUNDAGE.

Lodi, N. Y., July 2, 1884.

Eccentricities in Queen Breeding.

I have had beautiful golden Italian queens mate with a black drone in a tent, and the first workers would be of golden color, but in the course of a month the workers would be all black; a month later they would be all mixed in color. A black queen mated with an Italian drone, in confinement gave similar results; the first bees would be black, later ones yellow, and still later, mixed. Further experience has shown that if an Italian queen mates with a black drone, the yellow is predominant, and *vice versa*. Have any readers of the BEE JOURNAL noticed similar facts?

Milford, Ill. HUGO VOLLAND.

Good Honey Yield.

We are having a fine honey flow, and have had a very heavy fruit bloom this spring. Our winter here was very cold and severe, and the spring was late, so that many colonies of bees was transformed into the "stingless variety." However, the excessive swarming that is now going on, will more than repair the loss. There are many bees kept in this part of the State, but only a few persons appear to know how to manage them, so as to obtain the best results. Since keeping bees and practicing "bee-ology," in this locality, many have taken the "bee-fever" and embarked in the enterprise with good results, and if the "fever" does not become too contagious (so as to overstock the country), we may expect good returns; for this year we have a prospect of a large increase in bees and a good crop of honey. A. W. Fisk.

Bushnell, Ill., June 30, 1884.

Apiarist or Apiator?

I notice that Keys calls a bee-keeper an "apiator." Do you think that will do as well as apiarist? J. M. Shuck.

Des Moines, Iowa, June 25, 1884.

[No; we very much prefer to follow Webster's Dictionary, and use the word "apiarist."—Ed.]

That Deep-Celled Foundation.

A few days ago I sent for a sample of the Weed foundation. I wanted to try it on a small scale before buying much. I thought that more was claimed for it than ought to be claimed for any foundation, that it cannot sag nor break down, and when the bees so readily accept of it, it must be an improvement on the old kind. The piece that I obtained, I put into an old comb just as I would a queen-cell; when next I saw it, a day or two afterwards, the bees had it drawn out and filled with honey. I think it is a pity this was not found out long ago. I have 20 colonies of bees; lost one last winter. They were on the summer stands packed with straw and chaff; they are doing very well. M. Higgins.

Windsor, Ont., June 20, 1884.

Bees Doing Nicely.

Basswood will be in blossom in a few days, then I hope to see them "boom," as white clover is nearly gone, unless we have more rain very soon. Arad C. Balch.

Kalamazoo, Mich., June 30, 1884.

Large Honey Flow.

My bees are doing well—storing 10 pounds per colony each day. I have only had 2 swarms yet; they were from the Italian colonies. The Cyprians stick to their home as long as they have room. There was a heavy loss of bees last winter, but they are increasing rapidly now. D. R. Rosebrough.

Casey, Ill., June 23, 1884.

Prospects for Honey in California.

Summer has now actually come, and California has now emerged from the "clouds;" and in the place of heavy fogs and drizzling rain, we have bright sunshine and clear blue skies. All seem to welcome this delightful weather with a thankful heart, but no one more than "the little busy bees," whose joyous and contented hum may now be heard from early morn until the setting of the sun. The faces of the bee-keepers have now a contented smile, in spite of their effort to look grave and pre-occupied. In this section, the black sage is almost out of bloom. The wild alfalfa is at its best. White sage is just coming in, while sumac and wild buckwheat are yet to come. The rains in California have been, this year, unusually late, and as a matter of course the bees have not had good weather for work; but, notwithstanding the lateness of the season, the prospect is good for a fair crop. As a general thing, bees are in most excellent condition. J. E. Pleasants.

Santa Ana, Cal., June 25, 1884.

But few Swarms.

Bees are very slow about swarming, this season. I have only had 4 swarms, up to this date, out of 49 colonies. The season has been very wet. White clover is now abundant. Samuel C. Ware.

Towanda, Ill., June 27, 1884.

Transferring Bees.

I have 15 colonies of bees that I wish to transfer from box hives to movable frames. Mr. Heddon, on page 412 of the Bee Journal for 1884, refers me to page 367 of the Bee Journal for 1883. Will you please publish the part about transferring bees, and oblige a subscriber. J. F. McMillan.

Healy, Ill., June 29, 1884.

[As there have been several calls for that article to be re-published, we here give the new plan as described by Mr. Heddon.—Ed.]

About swarming time I take one of my Langstroth hives containing 8 Given pressed wired frames of foundation, and with smoker in hand, I approach the hive to be transferred. First, I drive the old queen and a majority of the bees into my hiving box. I then remove the old hive a few feet backward, reversing the entrance, placing the new one in its place, and run in the forced swarm. In two days I find 8 new straight combs with every cell worker, and containing a good start of brood. Twenty-one days after the transfer, I drive the old hive *clean* of all its bees, uniting them with the former drive, and put on the boxes, if they are not already on. If there is any nectar in the flowers, the colony will show you comb honey. About the queens: I usually kill the forced queen as the bees run in.

I run them together as I would one colony in two parts. Now to the old beeless hive; of course there is no brood left, unless a little drone brood, and we have before us some combs for wax, for more foundation, and some first-class kindling wood.

If you have no method by which you can use a full hive of frames, of full sheets of foundation, running a full swarm into them at once, by all means procure it without delay.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., July 7, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. Chas. F. Muth.

NEW YORK.

HONEY—Present sales of comb honey are slow, and will be until the new crop arrives. We quote: Fancy white 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market. Extracted, white, 8@9c.; dark and buckwheat, 7@8c.

BEESWAX—Prime yellow, 34@35c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—The new crop of comb honey is coming on the market, and nearly all of the arrivals to note are in good order, and the quality of the honey is of the best, being white, and flavor that of clover and linden; frames are unusually well-filled. The crop of comb honey of 1883 is nearly all cleaned up. We have not had any old comb honey to offer for several days. Extracted honey is in very light demand, and prices irregular; the stocks of it are large.

BEESWAX—Not plentiful, but the demand is also light at 30@37c for fair to prime.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO

HONEY—Only small lots of new crop have thus far arrived. There is no urgent inquiry at present, and considerable difference exists between the views of buyers and sellers as to values. Small lots of new white comb have been sold at 15@18c. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 5@7c; dark and candied, 4@—

BEESWAX—Wholesale, 27½@30c.

Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—No change to note in prices. As predicted in last report, the temporary activity was only accidental, and last week has been dull. Some little new honey is now arriving, but it fails as yet to tempt buyers to any extent. I look, however, for a very large demand a little later, and would suggest shipment by Aug. 1, of all that is ready in quantities to justify. I have still a few more "Suggestions on Packing and Shipping Honey," to mail free on application. I will also furnish shipping stencils free to any one desiring to ship to me.

BEESWAX—Nominal, at 30@35c.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 16@17c; extracted, 7½@8c.

Geo. W. Meade & Co., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

Advertisers' Opinion.

My advertisement in the BEE JOURNAL, has brought me over 400 responses. DR. G. L. TINKER.
New Philadelphia, O.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.
E. A. THOMAS & CO.
Colerain, Mass.

Having advertised in the AMERICAN BEE JOURNAL quite extensively for the past two years, I would say (without solicitation) that it has sold more queens for me than any other three periodicals I have ever tried.

My bees are in fine condition this spring. I have lost but 4 out of 182 colonies. The outlook is fine for a good season. L. J. DIEHL.
Butler, Ind.

The BEE JOURNAL does its advertising wonderfully well. It brought to me responses from Canada to the Gulf of Mexico, and from the Alleghanies to the Rocky Mountains.
WM. M. ROGERS.
Shelbyville, Ky.

◆

☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

◆

☞ Cook's Manual in cloth and the Weekly BEE JOURNAL for one year will be sent for $3. Manual and Monthly, $2.00. We have no more of the old edition left, and, therefore, the club price of that edition at $2.75 and $1.75 is withdrawn.

DR. FOOTE'S

HAND BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause&c
Malaria Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only 25 Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports — a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

What they Say of it:

From Prof. A. J. Cook, Lansing, Mich.—"I have greatly to thank you for getting up the exquisite little Convention Hand-Book. Surely the old 'saying' is true—being a thing of beauty, it ought to be a joy forever."

From Mr. A. I. Root, Medina, O.—"Send me —— dozen of the Convention Hand-Books. We have had quite a number of inquiries for something of that sort, and yours seems to be quite nicely gotten up, and just what is wanted."

From Mr. J. E. Pond, Foxboro, Mass.—"The Convention Hand-Book is just the thing. The digest of Parliamentary Rules it contains will prove of great value to every one. I trust it will receive the patronage it so well deserves."

From G. M. Doolittle, Borodino, N. Y.—"I am in receipt of the new Convention Hand-Book, and must congratulate you on the happy thought of such a work, and the neat appearance of the book. It is a work you may well be proud of, both as to the matter it contains, and the splendid material used in its make-up. It will meet a long-felt want; and, were it so that I could attend conventions as in former years, ten times the price would not seem too much to pay for it, for by the instruction therein given, any man could be kept from many a blunder, much to his mortification. I hope in the near future to again be at liberty to go to conventions, when I shall prize the work very highly."

From Mrs. L. Harrison, Peoria, Ill.—"The Bee-Keepers' Convention Hand-Book is a gem. It should be in the hands of every one who attends a bee-convention, and then there will be no need of embarrassment on account of ignorance of Parliamentary Rules. Accept my thanks for sample sent."

From Mr. Jas. Heddon, Dowagiac, Mich.—"The Bee-Keepers' Convention Hand-Book is received. I saw it advertised, but conceived no approximate idea of its great value to bee-keepers attending conventions, until I perused it. Many times the price of my copy would be no temptation for me to do without it. It will make us all want to talk at once, I fear. You deserve the thanks of all, and I herewith tender mine for this helper."

From Mr. G. W. Demaree, Christiansburg, Ky.—"The Convention Hand-Book is the most exquisitely gotten up, and the nicest book in my collection of apicultural works. It contains much valuable information, and especially as many of the presiding officers of our conventions are selected to fill those important positions because of their practical skill as apiarists rather than for their fitness as presiding officers, this little work will fill a long-felt want. Please accept my thanks for your untiring labor to promote the apicultural interest of the country."

From Dr. G. L. Tinker, New Philadelphia, Ohio.—"I prize the Convention Hand-Book very much, and it will be a valuable aid to bee-keepers attending conventions. The questions for discussion are concise, and cover the field of the most interesting and unsettled points in bee-culture. The book will help to systemize convention work, and enable the members to do business properly."

From Mr. W. Z. Hutchinson, Rogersville, Mich.—"If every bee-keeper would read the Convention Hand-Book, and profit by its perusal, our Conventions would be more orderly and have more beneficial."

From Mr. George Hilton, Fremont, Mich.—"I think the Convention Hand-Book is destined to fill a long-felt want, and should be in the hands of every intelligent bee-keeper."

QUEENS!

BY RETURN MAIL,

FROM OUR NEW STRAINS OF

ITALIAN AND ALBINO BEES.

We are happy to announce to the bee-keeping public that we are now prepared to send you QUEENS on short notice, at the following low rates:

Untested, each	$ 1.00
" per ½ dozen	5.50
" per dozen	10.00
Warranted, each	1.10
" per ½ dozen	6.00
" per dozen	11.00
Tested, each	2.00
Select Tested, each	2.50

Send for our descriptive Price-List and see what our customers say of our goods.

Address, **WM. W. CARY & SON,**
COLERAIN, MASS.

(*The oldest breeders of Italian Bees in America.*)
28Atf

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEE-KEEPERS, before ordering your APIARIAN SUPPLIES, Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The British Bee Journal is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly American Bee Journal and the *British Bee Journal*, both for $3.50 a year.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

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B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

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G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

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On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 5 cents per pound** above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

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I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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White Poplar Dovetailed **SECTIONS** A Specialty.

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At Lowest Figures!

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4A1y

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GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
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24A18t

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Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

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976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

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MAYSVILLE, KY.
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11Atf

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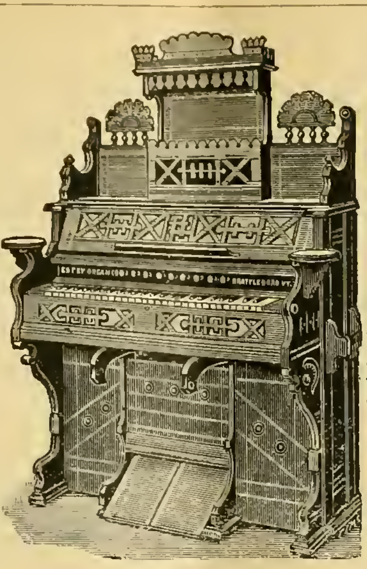
AND BEES.

Dollar Queens, 90c.; six, $5.00; twelve, $9.00. Warranted, $1.50; tested, $2.50; selected, 25 cents extra. Warranted pure. Order now and get choice Queens. Send money by P. O. Order, Registered Letter, or American Express.

27Atf **N. F. ASHTON, Davenport, Iowa.**



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188 and 190 State St., CHICAGO.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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Articles for the Apiary

Send for our 16-page illustrated Circular.
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ALLEN & CO.,
26A4t AUGUSTA, MAINE.

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Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.

Price, 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.
923 West Madison Street. CHICAGO, ILL.

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

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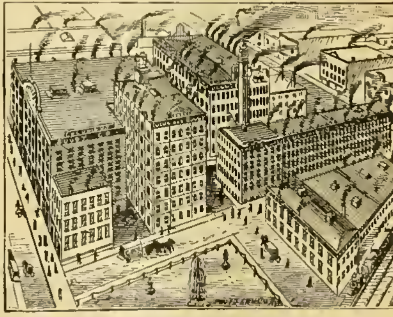

AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of travelling in that country with ostriches as a motor. 24A18t

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Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT,** Laceyville, Pa.

1868. 1884.

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COLUMN.

BEST GIVEN
COMB FOUNDATION.
Wholesale and Retail.

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HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey......................	..$3.00
The above Hive complete for both in one	4.50
One Hive in the flat.................	2.00
Five or over, each	... 1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

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I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!
Our New Strain,
Also IMPORTED ITALIANS!

Take your choice. Prices :

Tested, to breed from...	$ 3 00
Untested	1 25
Untested, after July 1st....	1 00
Untested, (per doz.) after July 1st...........	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON.
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition
OF
BEES and HONEY,
OR THE
Management of an Apiary for Pleasure and Profit; by
THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition.

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FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

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925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
GEO. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,
Lock box 995, Belleville, St. Clair Co., Ills.
18A13t 6B3t

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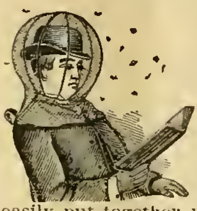

There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

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CHICAGO, - ILLINOIS.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & CO., Augusta, Maine. 4A1y

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BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid .. ..in May and June, each....$	.50
Italian—untested—not warranted, in May and June, each....................	1.00
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Full colonies of Hybrids..........................	7.00
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20Atf **L. J. DIEHL, Butler, Ind.**

J. W. ECKMAN,
DEALER IN
Pure Italian Bees and Queens

For further information, send for Circular.
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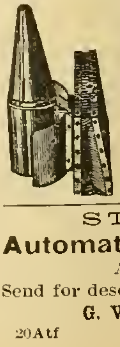

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I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

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STANLEY'S
Automatic Honey Extractor
AND SMOKER.

Send for descriptive Circular and Prices to

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20Atf WYOMING, N. Y.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., July 16, 1884. VOL. XX.—No. 29.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1.**

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

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To Australia—Weekly, $1; Monthly, 24 cents.

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THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

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CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Clu*
The Weekly Bee Journal,................	$2 00..	
and Cook's Manual, last edition (in cloth)	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)......	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work.........	4 09 .	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing........	3 00..	2 75
Scribner's Lumber and Log Book....	2 35..	2 25
Fisher's Grain Tables................	2 40..	2 25
Moore's Universal Assistant.........	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees..........................	2 75..	2 50
King' Text Book......................	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
British Bee Journal..................	3 75..	3 50
The 7 above-named papers.......	8 25 .	7 00

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ The Gibson County Bee-Keepers' Association, will meet at Trenton, Gibson Co., Tenn., on Aug. 2, 1884. A good attendance is expected.
T. J. HAPPELL, *Sec.*
J. W. HOWELL, *Pres.*

☞ The meeting of the Bee-Keepers' Association of Northeastern Kentucky, will be held in the city of Covington, Walker's Hall, on Aug. 13, 1884. G. W. CREE, *Sec.*

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
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E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH, Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY.

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

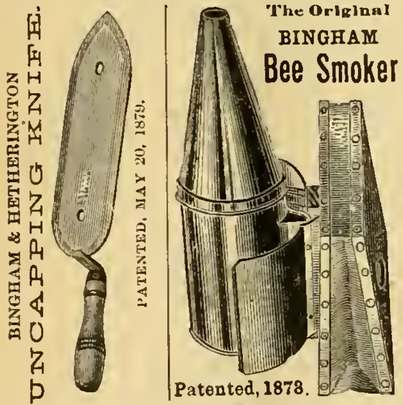
CHAS. DADANT & SON,
5ABly HAMILTON, Hancock Co., ILL.

Rise in Prices of Foundation

The prices of Comb Foundation are NOW **advanced two cents per pound** from the quotations in our retail Price List, and **three cents, per pound, at wholesale.**

CHAS. DADANT & SON,
23ABtf Hamilton, Hancock Co, Ills.

VALUABLE
ORIGINAL PATENTS.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

BOOKS!

Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, in cloth, **$1.00**; in paper covers, **75 cents.**

The Apiary Register, by Thomas G. Newman.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00**; for 100 colonies, **$1.25**; for 200 colonies, **$1.50.**

Honey as Food and Medicine, by Thomas G. Newman.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JULY 16, 1884. No. 29.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Comb Honey Without Separators.

We must say that we have never been favorable to the plan of dispensing with the use of separators, when getting comb honey ready for the metropolitan markets. We have seen so many ill-effects of the non-use of separators, that we have about concluded that it was detrimental to the best interests of honey producers to favor the plan.

We have just now received the following letter and the box of honey therein mentioned:

DEAR EDITOR:—I send you to-day, by express, 2 of my two-pound section boxes with honey produced without separators, by my new strain of bees. I got 54 sections like the ones sent, every one of which could be glassed like the ones sent. So much for comb honey without separators. The quality of the honey, also, is the finest I have ever obtained. None of my Italians ever produced honey so fine and clear.

DR. G. L. TINKER.

New Philadelphia, O., July 7, 1884.

The honey is elegant in appearance, superb in quality, and though the sections are only one and three-sixteenths of an inch thick inside the glass, the honey is as straight as a board, and the glass (though it almost touches the honey all over) seems to be equi-distant from the capping of every cell: The glass is held to the section by two elastic bands.

The Doctor should feel highly gratified at the production of such elegant specimens of comb honey.

If this can be done, without separators, in large quantities, it is all that can be desired, and its accomplishment will be hailed with delight by thousands who have hitherto considered separators a necessity.

It is true that neither one flower nor one bird will make summer--we need the full chorus of myriads of birds of every hue, the universal bloom of nature's loveliest gorgeousness, the genial and refreshing showers, and the light and heat of the glorious "orb of day" to complete the indispensable features of summer. It is just the same with this important matter of the use of separators—we need the test applied to large products, in order to demonstrate the possibility of the successful production of comb honey without separators, so that we may be assured that it will alike answer all the requirements of the producer, the wholesaler, the retailer, and the consumer.

Let us hope that the present experiments, and the many individual successes which have been reported, may prove to be the first-fruits of the great harvest of such experiences which shall fully and unequivocally demonstrate the successful production of comb honey without separators. If not, then we cannot afford to dispense with their use.

☞ Mr. J. Stewart, Rock City, Stephenson County, Ill., Secretary of the "Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association" makes the following request:

At our last meeting in Rockton, the Association passed a resolution ordering me to correspond with all bee-keepers' associations in the State, in order to endeavor to have a law passed by the State Legislature for the prevention and destruction of foul brood. As I do not know the names of the associations in the State, or the addresses of the secretaries, I would request the secretaries to furnish me with their addresses and the names of their associations, as required, so that we may act in concert.

☞ This is "convention year," and there is to be an International Convention of bee-keepers at South Kensington, London, England, on Aug. 7.

Cyprians, Syrians, etc.

Mr. L. C. Root, author of "New Bee-Keeping," in the July *American Agriculturist*, gives his views of some of the new varieties of bees which have been introduced into the United States with considerable expenditure of time and money.

The Cyprians have some marked characteristics. They have been quite thoroughly tested, but do not grow in favor with the majority. They are far too irritable to be agreeable to handle. Some consider them superior honey gatherers. I have given them quite a thorough trial, and the only point I could find in their favor, was a tendency to breed late in the fall, which is desirable as affording a good force of young bees when going into winter quarters. I have not tested the Syrians. Mr. Benton pronounces them among the very best. The Carniolans are said to possess some very desirable qualities, and a cross between them and the Italians has a good reputation. Much has been said of the Holy Land or Palestine bees, but my own experience does not corroborate all that is claimed for them.

Mr. Julius Hoffman received an importation of Caucasian bees in 1880. He has experimented quite extensively with them, and is of the opinion they are superior in many respects. In fact, I have never heard more desirable points claimed for any one variety than Mr. Hoffman claims for these. He is one of our most practical bee-keepers, and his conclusions should be receivid with confidence. Much credit is due those who have been so persevering in securing to us these new varieties. The ultimate results must be of great good, as the future crossing of these strains will, no doubt, give us one with a combination of very superior traits.

☞ The article on page 420, entitled "Expose your Hives to the Morning Sun," should have been credited to the *British Quarterly Review* for December, 1842. It was intended to show rather a fine specimen of magazine bee-writing of 42 years ago, but the date there given, by an oversight, made it quite a recent matter.

☞ Letters for publication must be written on a separate piece of paper from items of business.

Migratory Bee-Keeping.

Since the disastrous failure of migratory bee-keeping, as tried by Mr. Perrine in 1876, by conveying them on steam barges on the Mississippi River, to follow the bloom, we have heard but little about it.

That such things do pay when properly managed, is demonstrated every year in Scotland, where bees are taken to the highlands where a perfect "sea" of bloom is provided by the heather; and in Egypt, the bees are taken up the Nile to gather the sweet nectar from the bloom, in its successive development. Messrs. Dadant & Son often move their bees to the "bottom lands" of the Mississippi River with complete success, and a remunerative yield of honey.

Mr. Baldridge, in connection with Mr. Flanagan, has inaugurated a similar experiment, and from an exchange we quote the following:

> Last November they took to the neighborhood of New Orleans some 300 colonies of bees for wintering. The plan was to keep them there to work in early spring, say to about the second week of June, then ship them north to Kane Co., Ill., to feed upon white clover and other superior honey-producing plants, until the first of August; then move them down to St. Clair county to gather honey from heart's-ease, Spanish-needle, etc., until cold weather closes honey-gathering. It is expected to secure three distinct honey seasons, and if desired, three periods of natural increase. Besides the advantage of an early honey crop, it is calculated that in the mild climate of Louisiana there will be little if any loss in wintering.
>
> The first part of this programme has been carried out, and the 300 colonies, filling two cars, have arrived in St. Charles, their summer home. Mr. Baldridge informs us that the bees wintered without loss, but that the extreme wet weather along the lower Mississippi greatly interfered with plant bloom, and that the honey crop was exceedingly light—indeed less than for many years, so he does not consider the profit settled for the first third of the season. The test for the second third will now be entered upon in Kane county.
>
> The freight on bees in quantity, from New Orleans to Chicago, is about one dollar per hive, to which expense must be added the time and services of the attendants. To take them back, stopping at St. Clair county, will add something to the cost of freight and handling. Apiarists will watch the progress of this new bee-enterprise with interest.

* * *

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

Another Bee-Paper Gone.

The *New England Apiarian* has ceased to exist. The June number contains the following announcement:

> My expectations have not been realized, and I find that I have lost considerable money during the past year, with a prospect of losing a great deal more this year. I think none of my subscribers or patrons desire me to run this at a loss, and certainly I do not feel like continuing to publish it unless it receives proper patronage. I propose to discontinue its publication, and want to be honorable and just with every subscriber. Those who have paid in advance I will arrange with some other bee-paper or magazine to send them copies for the time they have paid.

* * *

Making Honey-Vinegar.

Mr. W. T. Maddox, of Alexandria, La., write us as follows:

> In the pamphlet on "Honey as Food and Medicine," I find this receipt for making honey vinegar:
>
> "Take 30 gallons of rain-water; heat it, and put it into a barrel; add two quarts of whisky, 3 pounds of honey, 5 cents worth of citric acid, and a little mother of vinegar. Fasten up the barrel, and put it into the cellar, and in a short time it will contain vinegar unsurpassed for purity and excellence of taste."
>
> I wish to ask the following questions concerning it:
>
> 1. Is it necessary to heat the water? If so, why?
> 2. Is it absolutely necessary that *rain* water alone should be used? Will not clear bayou or river water do as well?
> 3. Having no cellars here, will not a house do to keep it in? Is it a cool or a warm place it needs to be kept in, after making?
> 4. Will it make a No. 1, strong vinegar, like the old-time apple or cider-vinegar, to warrant one in making it on a large scale? What is its color?
> 5. How long after making, before it will be ready for use? Should the bung be driven tightly, or the hole left open?
> 6. If, by adhering strictly to the recipe, it is made in warm weather, is there any chance of a failure?
> 7. What is the best method of making "mother of vinegar" by the quantity?
>
> I have always been under the impression that it was necessary to put the barrel in a warm place (in the sun even), to make it work freely and quickly, and that it should be left open. A reply to the above questions will oblige.

As Mr. T. F. Bingham has had considerable experience in making honey vinegar, we requested him to answer the foregoing questions, and he has sent us the following:

> Two pounds of honey to two gallons of water is not far from my plan, and it would change (color, time of making and quality of vinegar) vastly. I am doubtful whether such vinegar would pass in our family. I think, however, that the merchants make vinegar about as above described. But I have never bought vinegar at the stores since we began to make it for our own use. There is no money to be made in producing such vinegar as we make. It is simply good to use, and we always have it in the house. T. F. BINGHAM.

Any one who has had experience in making honey vinegar is invited to answer the other queries.

* * *

Beeswax.

In an Exchange we find the following, concerning the care of cappings, and obtaining beeswax from them:

> The "cappings" which accumulate in the extraction of honey, and all odds and ends of comb, should be carefully saved, but in warm weather it is well to render them into wax as soon as possible; otherwise they are liable to become infested with the bee moth's larvæ. What is called a Wax Extractor is a very convenient utensil for rendering wax. It is simply a "basket" of perforated zinc, inside a "steamer" which is set over a kettle of boiling water. The refuse comb is placed in the basket, and the steam rises and melts the wax, which is caught by a false bottom in the steamer, and runs out through a spout in the side. When there is not much wax to render, the cappings of combs can be put into a tin sieve, the sieve covered, and then set over a pan of boiling water. The steam will melt the wax, which will run down and rest upon the water in the pan. The pan and its contents can be set aside until cold, when the wax will be found formed into a cake. Another method is to put the combs into a cloth sack, and the latter into a wash-boiler—the sack being held at the bottom of the boiler by means of a stick, the upper end of which presses against another stick, lying across the top of the boiler, and tied to its handles When the wax is melted, the boiler is set aside until the wax is cool enough to be removed. Wax can be cleaned from utensils by using a cloth saturated with kerosene oil.

* * *

☞ Comb, in frames, can be kept over the summer free from the depredations of the larvæ of the bee-moth if they are suspended in the light and air, and are 3 or 4 inches apart. Moths love darkness and uncleanliness, and deposit their eggs in cracks and crevices about hives, where bees cannot gain access to them. Do not permit refuse comb to lie around the apiary or bee-house. I have put frames of comb containing their larvæ into a hive of Italian bees, and in half an hour could see the bees bringing them out. There is no need of any other moth-trap, for they are always baited and set.—*Exchange.*

CORRESPONDENCE

For the American Bee Journal.

"What do we Know."

G. M. DOOLITTLE.

On page 411, under the above caption, Mr. S. R. Mason says: "All the correspondents of the bee-papers are as opposite in their opinions and practices as it is possible to be. I have looked in vain for some one person whom I could follow with a certainty of success, and as freely as I would a teacher of any of the common branches of human knowledge * * Stop quarreling, write sense, and the common sort at that."

As there seems to be an opinion similar to the above prevailing with most of the beginners in bee-keeping, and also with many who have kept bees as long or longer than Mr. Mason, perhaps a little explanation of the matter may help us, as readers of the AMERICAN BEE JOURNAL, to understand each other better, or at least help us to understand why nothing pertaining to bee-lore can be followed like a rule in arithmetic. Twice 2 makes 4 every time, because it cannot be otherwise, no matter by whom it is multiplied, nor at what season of the year the computation is made, or in what locality; hence we have the *rule* of multiplication as being always the same. The same of addition, subtraction, etc., but if we come to apply any rule similar to the above, to the bees, we find it wont work, for the reason that every season brings its changes. For instance, last season, in our basswood honey-harvest, I found I could introduce a queen by letting her run in at the entrance, and smoking the bees 2 or 3 minutes after I had let her run in; and as I did not lose a single queen out of 30, I set it down as a rule that queens could be thus introduced safely every time.

Now, thought I, here is our common-sense rule that will apply to bees like the rule of multiplication applies to the multiplication table; but when I came to use the same rule after the honey harvest was over, I found my rule was "no good," as 3 out of 4 queens put in in that way would be lost.

Again, I wrote to a friend at the time I was having success, how to introduce queens, in reply to such a question from him; and when he tested it in a different locality, he lost every one so tried. The result was, he wished Doolittle were "brimstoned," or something else, as Mr. Mason wishes of "all the writers, editors, novices, etc."

Now, why was it that my friend did not succeed as I did. Simply because all things were not in the same condition in his locality that they were in mine. Again, when there came a change in the condition of my apiary, lso failed, and I doubt if those ex- conditions ever came to my apiary again, Thus we see that no rule regarding bee-culture can be formed which will do to follow throughout the country, as can the rules in arithmetic; and the only thing we can do is to try the plans of others cautiously till we know it is suited to our wants, using charity all the time. There is a great difference in individuals: some experiment carefully, proving everything critically step by step as they go, arriving at almost a definite conclusion with the first experiment; while others experiment in such a careless slip-shod manner that their experiments at the end of several years are of little value. Notwithstanding all these drawbacks, any careful reader of the BEE JOURNAL will find much of value after he has sifted the chaff from the wheat. One hundred dollars per year would not hire me to dispense with bee-papers, for it is to them that I owe nearly all the knowledge I possess relative to bee-keeping.

Now, having the above before us, I wish to reply in a few words to W. H. Stewart's article found on page 409. He says that I make a mistake in saying "many cannot afford to buy foundation;" and further on he says: "We might as well conclude that some persons who keep horses could not afford to buy oats or corn to feed. I cannot conceive of any reason why a bee-keeper could not afford to buy foundation unless it is because he is poor."

Well, the reason Mr. Stewart's conception is so limited, is that he judges all locations like his own. Does he suppose that the horsemen of the large, fertile plains of Texas find it expedient to pay high prices for oats with which to feed their horses, when the luxuriant grass is going to waste from the want of more horses to graze it? No; such cannot afford to buy oats, for the grass affords them all that is needed.

Again, in saying that swarms are cast in a time of good honey flows, Mr. S. only shows his ignorance of other localities; for here the greater part of our swarming is done when the bees are only living from "hand to mouth." In 1876 I had 339 swarms from 68 colonies, yet that was the poorest year for honey, during the last 12 years. That all those swarms would fill a hive with comb and brood (where such swarms were not returned) in from 10 days to 2 weeks, while colonies not having swarmed would not even work foundation, was the reason I said that I could not afford to buy foundation; for the natural comb was cheaper than foundation at 10 cents per pound.

If Mr. Stewart can afford to pay $2 per pound for foundation in his locality, I still say as I did before, he can pass the article by, the same as if it had never been written, as it was not intended for those who *are sure* that foundation is profitable.

Mr. S. thinks that 10 pounds of foundation was not sufficient for me to use to know of its worth. I could inform him that I tried to use much more, but as it sagged and warped so, I tore it from the frames, as it was not worthy of the name of comb, hence I did not use it.

As my article in a late number of the BEE JOURNAL answers the rest of Mr. S.'s objections to my article written in 1883, I will not dwel further upon it, except to notice what he quotes from Prof. Cook's Manual, where he says: "The advantage of foundation is first, to insure worker comb; and second, to furnish wax so that the bees may be free to gather honey."

Now I wish to say that the second proposition is what troubles me; for in all my use of foundation, both in the brood-chamber and in the section boxes, ¾ of the foundation used is never utilized by the bees except as a base on which to add their wax which they secrete, as in this locality our flow of honey is so copious that wax is secreted by the bees in such quantities that they have no need to use that furnished them in the foundation.

I have always been considered a heretic on this foundation question, and when I wrote Mr. A. I. Root, years ago, relative to foundation killing our honey markets if we persisted in using such as was then made in our section of the country, he refused it a place in *Gleanings*, saying that the thousands of pounds of beautiful comb honey built on foundation, now sold in our markets, proved that I was wrong, and that foundation would be a "joy forever." But now I am not alone, for in the last *American Apiculturist*, almost the largest bee-keeper in the world (P. H. Elwood), says: "The question of adulteration is important; but why not throw a bright light toward those bee-keepers who adulterate by using fish-bone foundation in sections. It is a well-established fact that bees do not always thin the base of foundation. When consumers of comb honey, who have never heard of such a thing as foundation, speak of the large amount of wax in the honey, and say the honey has the flavor of soap suds, it is time that producers awake to the evil that threatens to seriously curtail the demand and consumption of comb honey. In comparison, I regard the packing of comb honey and glucose in glass jars, when properly labelled, a subject of little importance. If the consumer does not like the flavor of the liquid surrounding the comb, as well as the comb honey, he can buy only the latter in boxes; but who shall estimate the loss when bee-keepers themselves shall adulterate what has heretofore been thought to be pure beyond the power of the adulterator." Again, a honey dealer from the State of Indiana writes me, wishing to secure all the honey that he handles, in natural comb, and says: "I fear that this foundation in sections will, and is doing honey-producers harm. It may not be noticed much yet, but if the bee-keepers continue adulterating their own comb honey, the demand surely will keep dropping off until it will be dead. Choice comb honey, if really nice, will all melt away in the mouth while being eaten; but I never saw any built on foundation that had not a tough piece of wax in the centre. In one lot in this market there was a regular 'fish-bone,' and one would as soon think of eating pasteboard as that stuff."

Dear readers, you who are so strongly in favor of foundation in sections, have you tested the honey you are thus putting upon the market, to see if it would compare with that in natural comb? If it will not, is it doing justice to our fraternity to place such on our markets? It will be remembered that by a careful test I made several years ago, I proved that the base of the foundation of a certain maker was even thinner than natural comb; but this was only a sample lot sent to me for trial. When I came to order quite a quantity, the next season, I found that it was nearly twice as thick as that I had the previous year. When I expostulated, the reply was that no man could live at the price paid for making foundation, if made as thin as the sample sent.

I sincerely hope that we shall all be careful that we do nothing to injure the market of our comb honey. I have not written anything for the sake of being an "off-ox;" but because I see reasons why we should all study carefully what we do relative to apiculture, and know that we are right in every particular, lest we be guilty of doing injury to our brother.

Borodino, N. Y.

Convention at North Salem, Ind.

The joint meeting of the Hendricks and Boone county bee-keepers was held at the apiary of Gully & Davis, one mile east of North Salem, Ind. The weather promised all that could be desired, and early in the day the friends commenced coming in, all intent on making the meeting a pleasant one. The time was well taken up in social chat, and looking over the tastily arranged bee-yard, the greatest attraction being the rows of brick hives, which Messrs. Gully & Davis are thoroughly testing.

The meeting was called to order at 11 a. m., Mr. A. Furnas being made President, with F. L. Dougherty Secretary. Messrs. Davis and Catterson, of Hendricks, with Messrs. Frey and Nolton of Boone, were appointed as a committee to select the place of the next meeting.

Mr. C. F. Muth, of Cincinnati, was asked to address the meeting, which he did at some length. He was both surprised and pleased to see so large a gathering of bee-keepers. There is much to be learned at meetings of this kind, and he knew that every one there would be benefitted by what they would hear and see, for some one would have a new idea to advance or a new mode of accomplishing some desired object. He said the question of marketing our honey crop was one of particular importance, and something to which each one of us should give particular attention. Honey should be placed on the market only in the nicest possible shape. The consumption of honey was increasing at a rapid rate, and it behooved each and every one of us to still increase the sales. Extracted honey is being more extensively prepared each season. Full markets bring low prices, and so our aim should be at all times to increase the demand.

In answer to a question by Mr. Furnas as to the relative cost of the production of comb and extracted honey, Mr. Muth said, counting from the field to the market, he thought the cost of comb honey was double that of extracted honey, while the price was only about one quarter more.

Mr. Dougherty knew by experience and by the reports from those who had made the effort, that each and every one could increase home markets ten-fold. The adulteration of our syrups is now so great that the people have become entirely disgusted in the effort to find a good article, such as they like, and now is our time to introduce to them about the only pure sweet obtainable—extracted honey.

Mr. Furnas, though not a honey-producer, said that they had about the same thing to contend with, in the production of sorghum molasses. The people are becoming educated up to this fact, and rely to a very great extent on the reputation of the producer. He agreed with Mr. Muth that each producer should label the packages and strive to make his goods reliable, so that his brand would be a guarantee of a pure and wholesome article.

Dr. Orear moved to a new location last fall, where extracted honey was hardly known, and but very little used, but his efforts to create a market had been very successful; in fact, far beyond his most sanguine hopes or expectations.

After some discussion, the meeting then adjourned to do justice to the bounteous supply of eatables furnished by the ladies.

The hour of adjournment was too soon over, but the imperative call of the President soon brought the meeting to order. The committee to whom was assigned the selection of a place, recommended that the next meeting be held at the apiary of Mr. A. Cox, 1¼ miles east of Fayette, in Boone county, on Aug. 21, which was adopted.

Mr. Wheitsell was decidedly in favor of these meetings; had been a bee-keeper for many years, but could gain more good, solid knowledge in one meeting of this kind than in one year's hard work in the apiary.

Mrs. C. Robbins, President of the State Society, was called on and made a few pleasant remarks. Was highly gratified to see the number of ladies present; thought it argued well for the bee-keeping interest among the ladies. She believed this a grand opening for women, who from necessity or desire wanted a business of their own, and hoped some day to see as many lady bee-keepers as men. She called attention to the advantages of making a good display at our coming State Fair, and urged the importance of each and every one taking a part, though small. What we need, said she, is a united effort.

Natural and unnatural conditions of bees in winter quarters, shading bees during the hot months, controlling the swarming impulse, rearing of good queens, etc., were some of the subjects further discussed, until interrupted by a sudden shower, which caused an adjournment for the day.—*Indiana Farmer.*

For the American Bee Journal.

The Real Cause of Bee-Diarrhœa.

A. A. FRADENBURG.

In my article on page 374, I said that I would give the proofs first and the theory afterwards, of the cause of bee-diarrhœa. I wish now to advance some theories.

On page 409, I notice that J. E. Pond, Jr. disputes my proofs. Being a lawyer it would naturally be supposed that he would know what proofs are, but it seems that he does not; for when I produced 45 witnesses that testified that where there was pollen there was diarrhœa, and 14 that declared that where there was no pollen there was no diarrhœa, I think that the large body of jurymen who read that testimony will agree that the proof was sufficient.

In the fore part of his article Mr. P. says: "But what does his proofs prove after all? Certainly not that pollen is the cause of bee-diarrhœa, but simply that in the case be mentions, no diarrhœa was found when sugar syrup was used for winter stores." Now, if Mr. P. will re-read my article, he will not find "sugar syrup" mentioned or referred to, either directly or indirectly. He will also see that I have proved that *very light* colonies of bees can be wintered just as well as large ones, and on the summer stands too.

Much stress has been laid on the necessity of having "sealed stores" for winter supplies; but I think that I have proved that sealed stores are not so very essential after all, and that pure, candied extracted honey is as cheap, safe and convenient food for bees, as can be had where they are in need of feed between early fall and spring.

I hold that all the foregoing proofs are of great importance to the bee-keeping fraternity, whether they have anything to do with bee-diarrhœa or not, but certainly some of them do.

Mr. P.'s 9 witnesses prove nothing at all, for it is a well-known fact that we may have pollen without diarrhœa; but I will challenge Mr. P., or any bee-keeper, to produce a case of diarrhœa, such as is known as the prevalent diarrhœa, without the presence of pollen or its substitute. I do not say that bees cannot be killed by unwholesome winter stores, such as sour honey, cider vinegar or sulphuric acid, etc., but I believe that good stores, with reasonably good protection and no pollen, will bring them through all right nearly every time, on the summer stands. I am glad that Mr. P.

has criticised my article, for I think such friendly criticisms help to bring out the fine, and often very valuable points that would otherwise pass unnoticed.

Mr. P. closes by saying: "He (the bee-keeper) who first discovers the cause of bee-diarrhœa will receive the heartfelt thanks of his grateful brethren." Now I claim to be that one; for I gave to the world the first proofs, *i. e.*, that pollen is the cause; and Mr. James Heddon is the second to claim those thanks; but I think I am just head-and-neck ahead of him, yet I heartly congratulate him, and I think his article, on page 405, fully confirms my proofs.

My theory is, that bees often have large quantities of pollen in their combs, and yet come through the winter well, and with but little if any signs of diarrhœa; but the reason is, that in such cases they do not eat of the pollen. I have seen whole combs of pollen, in winter and early spring, that had been uncapped and the honey taken out, but the pollen untouched; then at other times they seem to eat of the pollen as fast as they come to it, and then they have diarrhœa in proportion. To find out under just what circumstances or conditions pollen can be left in the hives during winter, and not have the bees eat of it, is the next important question, and that far I have not yet advanced; but the "pollen theory," I believe, sooner or later, every bee-keeper will yet have to admit.

Port Washington, O.

* * *

Prairie Farmer.

Honey-Dew and White Clover Honey

MRS. L. HARRISON.

"The best laid plans of mice and men gang aft aglae." At the commencement of the white clover bloom I put some nice white comb in frames, into the super of a hive, in order to secure some extra fine extracted honey. When the combs were filled and nearly all sealed, I extracted them and found the product to be very thick, dark honey of a peculiar flavor. I inferred it was from the black locust, but reports from different sources by persons who have investigated the matter, indicate it to be the product of honey-dew, gathered from the unusually luxuriant growth of maples, and some other trees. There is an aphis found on the leaves of these trees. This dark honey will be mixed more or less with white clover, and damaged to some extent.

The bees are holding high carnival to-day, and it is mete they should, for the linden bloom is at its hight. They have not a minute to lose, and dart in and out of their hives with astonishing rapidity. As I write by the open window the perfume from thousands of linden flowers is wafted in. The delicious nectar secreted in the corollas of the linden bloom is a very different article than the product of plant lice, and yet many persons think bees make honey, and that it is all alike, and should sell for the same price.

Bees are very rich in wax, and good natured too, while forage is so abundant. I came along on the sidewalk to-day, and a run-away swarm had clustered on a small willow tree close to the fence; a lady was anxious to secure them, and I shook them off into a box for her. The bees rattled down all over me like shelled corn, but did not try to sting, and the limb where they clustered was covered with wax.

There are a number of run-away swarms heard from in this locality, and they will continue plenty as long as people are so slow to learn that bees should be hived as soon as clustered. A neighboring Irishman had a very large first swarm lately, and he said he "would lave them until avening, and when it was cool he would hive them." His bees did not wait until evening, but emigrated to a home of their own finding.

Bees will often desert a hive the next day after swarming, if it is very hot and the sun shines directly upon it. We had a swarm lately that was hived and placed in the shade in the afternoon; the next morning the sun shone upon it and the bees came out and clustered, although they had built considerable comb.

In watching a swarm issue, we noticed a ball of bees as large as an apple on the alighting board of an adjoining colony. We poked off the bees and secured the queen, and placed her in a cage in a new hive, setting it where the one from which the swarm issued formerly stood, and in a few minutes the bees returned and entered the hive. It would have been a safer way to throw the ball of bees into water, as they sometimes sting a queen when they are being pulled off. When thrown into water, the ball quickly falls to pieces, and the queen can be picked out without being injured.

The best place to store honey is in a dry, hot, well-ventilated room. If kept in a cellar it gets watery and oozes from the cells. Do not allow colonies to swarm 3 or 4 times, as there would be little or no income excepting from the first. If the queen cells are cut out and the second swarm returned, then there will be 2 large colonies, and surplus may be expected. If bees are the object sought in lieu of money, then build up these after-swarms by giving them frames of chipping brood, and honey from strong colonies. If left to themselves, they generally perish during the following winter.

It is well to save the queen-cells in the very best colonies. When the cells are ripe, or, in other words, the young are ready to emerge, the colony can be divided. Bees gnaw off the ends of the cells, not clear through, but partially, about the time the queen is expected, and a frame containing such a cell and covered with bees may be removed to a hive where she will soon hatch, and the bees remain with her. Queens reared under the swarming impulse are claimed to be the best. These young queens are a bonanza, when fecundated and laying, for introducing into a queenless colony, or where an impotent queen is discovered.

Peoria, Ill., July 1, 1884.

* * *

Ontario Bee-Keepers' Association.

A meeting of the Ontario Bee-Keepers' Association was held at Toronto, July 3. The following were in attendance: S. Corneil, President; J. Hall, Dr. Thom, Jacob Spence, D. A. Jones, B. Chalmers, C. Mitchell, Messrs. Patterson, Walker, Losee, Baxter, Pellet, Webster, and others.

The President explained that the objects of the meeting were: First, to obtain necessary legislation to protect the bee-industry against the dangers of foul brood. A letter addressed to Dr. Thom was read by the President, showing the dangers to the interests of the Association generally, growing out of the attempt of incompetent persons to conduct apiaries.

Reference was made to the interview between members of the Ontario Government and a deputation from the Association in reference to the desired legislation, in which the Government requested that the Association supply statistics showing the extent of the bee-keeping industry, and the grounds of its claims to Government aid. During the discussion a number of opinions were advanced in favor of the union of the Association with the Ontario Fruit Growers' Association, but no formal action was taken in this connection.

Considerable time was occupied in the discussion of the best methods of collecting the required statistics. Finally, Messrs. S. Corneil, D. A. Jones and Dr. Thom were appointed to wait upon Hon. A. M. Ross to request that the Bureau of Agriculture and Statistics take charge of the matter, and procure the information in connection with one of the season's crop reports.

The Association, at the request of the management of the Industrial Fair, made the following nominations for judges for the honey and apiary departments at the approaching Toronto Exhibition: Dr. Thom, S. T. Pettit, D. Chalmers, C. K. Tench and P. C. Dempsey.

Mr. D. A. Jones was heard by the Association with reference to the proposed Foul Brood Act. He thought experts should be appointed, whose duty it would be, when so requested, to examine supposed diseased honey. He thought it would be a good idea to have diagrams and full descriptions of the various stages of the disease prepared. He believed the only danger of spreading foul brood was in the bees carrying it from hive to hive.

Dr. Thom called attention to the necessity for the proper inspection of imported bees, and Mr. Jones claimed this matter as urgently requiring attention as the inspection of imported cattle. Mr. Jones, in reply to a question, also expressed the opinion that the present season would prove a favorable one for bee-keepers.

Direct Introduction of Queens.

S. SIMMINS.

Having in common with many others, experienced much annoyance, anxiety, and loss of time, by introducing queens with the cage, I have adopted a system of immediate introduction, which proves to be not only more expeditious and economical, but invariably certain in its results.

Having often united bees without disagreement, by alternating the combs of the respective hives, I came to the conclusion that a queen on a comb parading unconcernedly among her own bees, would be taken no more notice of than the others; and this I have, by unvarying success, proved to be the case, and the amount of vexation, time, and labor, saved to myself, has already been considerable.

INTRODUCING QUEENS FROM NUCLEI.

Where one has spare queens in nuclei, and all the frames are of one size, a queen can be introduced to the desired colony simply by inserting the frame of comb on which she is, surrounded by her own bees.

Carry the comb from one hive to another in an ordinary comb box; remove the queen that is to be superseded (if one), and as soon as the stranger, with her attendants on their comb, is placed in the hive, the union is certain, and there is no need to examine them again until their turn comes in the ordinary course of manipulations.

It will be observed that, instead of the bees being first permitted to find out their loss, the exchange is completed before they are aware of the fact; and the colony is not without a laying queen even for five minutes—a great consideration, especially when building up at the commencement of the season.

A queen received from a distance in a nucleus hive with frames of the right size, can be united, together with her bees, in the same way; but it is advisable that the nucleus be first placed near the full colony, and the bees allowed to fly. By evening they will have recovered from the excitement of the journey, when the union may take place.

QUEENS RECEIVED IN BOXES OR ON ODD FRAMES.

In the former case a queen should be shaken with her attendants into a comb-box on to a comb containing unsealed honey (if a comb containing unsealed honey is not at hand, a little syrup can be substituted by pouring it into the cells on either side of a comb before it is given to the strangers, previous to their introduction); close up securely, and leave them for a few minutes, while the colony to be operated upon is being deprived of its queen, when the combs should be parted at about the centre of the hive or cluster of bees. The sides of the combs nearest this vacant space, and the adhering bees may then be sprayed with sweetened water (not scented), when the occupants of the comb box on their comb may be immediately inserted, as in the first instance, and all will be well.

A queen can also be inserted alone, on a comb of unsealed honey (or syrup). In this case she should be without food for a short time previous to being placed on the comb, when she will at once proceed to feed at the open cells, and while doing so, can be inserted (together with the comb) as before. Wherever a queen may be placed, whether being alone or with a few attendants, she should be kept warm; the slightest chill being injurious to her constitution.

Where on odd frames, a queen can be brushed off the comb with a good number of bees into the comb box, with a feather, and then united in the same way.

INTRODUCING TO HIVES WITH FIXED COMBS.

Drive the bees until the queen is seen to ascend, when she must be captured. Now discontinue the driving, and spray the combs, and the bees left among the combs with thin syrup; turn the hive the right way up on to a news sheet, raising one side about 2 inches from the sheet with a stone or piece of wood. The bees that were induced to leave the hive may now be returned, by shaking them out on the sheet close to the hive, and while they are rushing in, place the stranger queen and her attendants among them, and all will go in and unite peaceably.

CONDITIONS NECESSARY.

Brushing the queen from a comb with a feather, is much to be preferred to handling her, and if the operation is quickly performed with a light touch, she is not rendered restless and nervous, as is the case when liberated from the hand.

When introducing a queen on the comb from her own hive, no syrup whatever is necessary, and none should be used; but where she is first placed on to another comb, the conditions are different. She has been disturbed by being turned from one box or hive into another, and in some cases a long journey has preceded the change; therefore it is best to use a little, as advised, just to give the bees something to do for a time, in case any such queen should show a momentary nervousness, which, however, will soon pass off, and no hostility is shown towards her.

On no account, in any instance, should a queen be daubed with syrup, or disturbed more than is absolutely necessary, as so much depends upon her appearing among her new subjects in an unconcerned manner. This is just the secret of the success of this system. The queen is placed where she feels at home—on a comb, surrounded by a number of her own bees. On the other hand, bees are delighted to receive a comb of honey, especially if it also contains brood, as is mostly the case where the queen is transferred on her original comb.

It is a mistake to suppose that bees cannot be united unless they have the same scent. Wherever there is a case of fighting in uniting bees, it has been brought about by the new-comers not making themselves at home in their fresh quarters, and this attitude of uncertainty and strangeness is sure to bring down upon them the vengeance of the original inmates of the hive. This state of things is brought about through the operator being ignorant of the peculiarities of bees, and, therefore, not proceeding with his work upon the right principles of management. In his hands the result would have been the same had both lots of bees been sprayed with scented syrup.

By following the rules I have here laid down, the merest novice may always succeed in uniting alien bees or queens to any desired colony, and no scent need be used in any case.

Where the bee-keeper has no spare combs, one should be taken from the colony that is to receive the queen, but every bee must be removed before it is given to the queen and her attendants in the comb box.

The author very rarely uses syrup in any case, and never where the queen is inserted on her original comb, but where it is advised, the novice cannot do better than follow the instructions given, when he can be assured of a satisfactory result.

IMPORTED QUEENS.

I would never advise that a good laying queen be deposed to make room for one just received from a long distance. The latter will not produce an egg for the first day or two, and very few, for a time, when she does begin, and will often be two or three weeks before she recovers her natural fecundity. Some never lay at all, while others, for a time, produce as many drones as workers, and soon die, or are superseded by the bees, if the bee-keeper does not trouble to do it himself. Long confinement and exposure are the causes of this tardy development and failure of production; although, of course, there is the probability that by an oversight a queen may not have been mated before being sent out. In that case she would either not lay at all or produce drones only.

Bearing these facts in mind, the careful bee keeper will give imported queens to nuclei, and either gradually work them up to a full colony, by occasionally giving frames of brood, or, after a few weeks, unite them to the desired colonies. Thus, the condemned and often prolific queens are not displaced until the new comers have had a chance of proving their fertility.

Many a new hand buys an imported queen expecting great things from her, but very often, even if given to a good colony, she disappoints him. The cause of so many failures and bad reports is to be accounted for by the fact that out of the large number of queens imported, only a very small percentage are really first-rate after being confined and exposed to the wear and tear of the journey, besides, in some instances, not being accompanied with sufficient bees to provide against the variations of temperature, and thus being subjected to a possible chill.

Out of several dozens of imported queens introduced into my own apiary during the past few years, I have found few to equal, and not one to excel those that being raised at home are enabled to commence their duties (after being mated) without the least check whatever.

The time will come when every bee-keeper, having in view the improvement of his stock, will not buy his imported or other queens forwarded as they now are with only a small number of bees, especially as is the case where they are sent through the post. Though I admit that at times, and during the warmest months, a queen may come through without being materially injured, the practice of sending only a few attendants, is one that must be strongly condemned by all intelligent bee-keepers.

Once exposed to a low temperature, the fertilizing fluid received at the time of copulation becomes abortive, and the queen, henceforth, is a drone-breeder. In cases of slight exposure only, a large admixture of drones is often produced, and the queen, appears to lose her own vitality as well, and soon dies if not superseded by the bees or their master.

The novice may be assured that where an imported queen has been introduced to a good colony, and does not excel those of the old kind, it does not prove the inferiority of the Ligurians in general, but rather that the constitution of the said queen has been impaired by some accident, such as previously stated, or he may, himself, have allowed her to become chilled, though only slightly, while inserting her.

Where a good queen is given to a weak lot of bees, in the expectation that she will build them up to a rousing colony, grievous disappointment will be the result. But on the other hand, had the small colony received the addition of a comb of brood and bees occasionally, the owner would have had his hopes realized.

UNITING BEES.

As I have never used scented syrup when uniting bees, I will only say that my success has proved that the various articles advised for the purpose are simply useless. In every case where a union has been effected, when adding peppermint, etc., to the syrup, without hesitation I assert that the same result would have been attained without the scent, and, in the hands of an expert, without syrup in any form. If the bees are pre-disposed to fight, through the operator not understanding their peculiarities, or the exact condition of those in hand, it matters not, even should he smother them in syrup, scented or otherwise, fighting will result.

The following directions will show how bees can be induced to amalgamate under all conditions, and without being sprinkled with syrup of any kind:

If the colonies to be united are not already adjoining, bring them a few feet daily nearer to each other, keeping the entrances towards the original directions. In the mean time take away all combs that the bees cannot cover, and when the hives are brought together, remove the queen that is not wanted, and then insert the combs with the adhering bees of one hive alternately with those of the other. What few are left about the sides of the denuded hive, can be brushed out, or shaken on top of the frames, when the hive may be closed up, and the union is effectual; the remaining queen also being undisturbed and allowed to reign supreme.

Where both colonies are in odd-sized frames, bring them together as before, remove one queen, and then shake off from their combs the whole of the bees of both lots on to a wide board slanting up to the entrance of the hive they are to remain in. Give plenty of room at the entrance, and all will unite in one happy family. Should there be any brood left in the rejected frames, it should be given to other hives containing the same size, or it may be cut out and fitted to those of the size given to the united bees, and placed about the centre, where it will soon be fixed up.

It will be of no use to toss the strangers on top of the frames, thinking they will draw down among the occupants of the hive. In that case instant fighting would be the result, and this will continue until the intruders are exterminated.

The only effectual plan is to shake or brush off from their combs, the whole of the bees on to a board as before, and then, after removing all but the selected queen, mix the newcomers up indiscriminately with the rushing "fanning" crowd, and all will draw in peaceably together.

The same method applies in the same case to straw hives, except that the bees will first have to be driven out of the fixed combs, and then returned together with the strangers.

Where both lots to be united have no combs, being either swarms, or driven bees, nothing is easier than to mix up both lots on a sheet, or board slanting to the front of the hive, when they will all draw under cover together.

In every instance there is one thing that must not be neglected, and that is, only one queen must be retained, whether selected or otherwise.

FERTILE WORKERS.

The presence of fertile workers is readily perceived. The eggs are dropped about in the most indiscriminate manner; often three or four in one cell, while others have none. Only one, however, of these are allowed to hatch in each cell—producing nothing but a drone, and when capped over, if on worker comb, it is considerably higher than the surrounding cells, whereas had the brood been worker larvæ, the capping would have been but slightly raised.

What is very remarkable, when these eggs are laid in drone comb, the insect produced is as large, and perfectly formed as those from a queen properly mated.

These laying workers are a pest to bee-keepers, and have often been quite a trouble to get rid of, as they cannot be distinguished from the other workers, and seldom could a queen be introduced to a hive containing them.

The means generally adopted for their extermination, though not always effectual, besides entailing much labor, is to remove the hive to some distance from the old site, when by shaking from the combs the whole of the bees, the main body fly back to the original location, while the laying workers, supposed not to have flown, are thought to be unable to return.

My method of direct introduction always answers most effectually in disposing of the nuisance. No matter how bad the case may be, even if they have queen-cells (so called, but containing only drone larvæ), the fertile workers subside immediately on the insertion of a queen on her own comb of brood with adhering bees.

Brighton, England.

For the American Bee Journal.

The Use of Carbolic Acid.

MAHALA B. CHADDOCK.

I have tried carbolic acid and it does not quiet my bees. I have a colony of bees which is very hard to manage, and I read what the Englishman said about carbolic acid, so I thought here is a good chance to try it. I put about a table-spoonful of it on a rag, and raising one corner of the muslin, laid it under, shut the cloth down and left them about two minutes. I used the acid full strength; but I diluted some of it, washed my hands and arms up to the elbows, and then carefully raised the muslin a little at a time, pushed the rag along, and the bees kept coming out all the time and stung me terribly. I had on a bee-veil, so that I did not care for stings, but they stung my arms so that they swelled up badly before I was done working with them—just 10 minutes. As soon as I saw that the acid was "no good," I used the smoker; but they had their "backs up" and kept on stinging. My fingers were swollen so that I could hardly hold the frames, and they were so numb that the last dozen or so of stings did not hurt much. I had always managed my bees with smoke, but I had to keep one hand working the smoker all the time, and I thought if I used the acid, I could have both hands to work with. The Englishman said that the acid would keep out ants, but I have tried it and it did not do it. I put it on the bottom-boards of the hives, where the ants are troublesome, and they walk around the spot and go right into the hives.

Vermont, Ill., July 6, 1884.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on the third Tuesday in August, at Leroy Highbarger's, near Adaline, Ogle County, Ill.

J. STEWART, *Sec.*

Rock City, Illinois.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Bees not Storing in Sections.

My bees will not work in the sections. I have glass on one side and tin on the other; the bees come up between the tin and the bottom, and cluster thick in the boxes, but will not work. Will you please tell me what is the trouble? I use the Langstroth hive. I have a division-board that separates the honey-boxes from the brood. The division-board comes down within ½ of an inch of the bottom of the hive where the bees run under and up in the boxes, on each end of the hive.

Clifton, Ill. GEO. W. COMPTON.

ANSWER.—Although you do not plainly say so, I guess that you are working on the side-storing plan. I think this is not nearly as good as the top-storing system. I also object to glass in connection with cases of sections. The practical apiarist does not care for it. Even the farmers about here would laugh at you if you insinuated that they needed any glass to look through to know the condition of their surplus cases. I think you do not give your bees sufficient communication with the sections. The bottoms and ends are not enough, though I must confess I cannot see why they refuse all work, after they once enter that unnatural out-of-the-way place.

Preventing After-Swarms.

On page 412, I asked the question about taking queen-cells from the comb to prevent swarming. I was referred to page 126 of 1883. I did not take the BEE JOURNAL in 1883. I have 6 new swarms. I have taken the queen-cells out of each hive; it is but little trouble with straight combs, but if there is a better way I would be pleased to know what it is.

Plainfield, Ill. G. C. BILL.

ANSWER.—The method of clipping all of the queen-cells, or all but one, to prevent after-swarms, always has been, and always will be, an impractical one. The reasons are simple; but it would require an article to give them all as I would wish to.

I will proceed to give you a plain, simple method that I have used successfully for the prevention of after-swarms. Let us suppose that colony No. 14 swarms June 14. With a non-erasive crayon we mark upon the hive O, June 14, and on the hive in which we put the swarm, S, June 14. Thus, we distinguish the old colony from the swarm, at a glance, as we make these marks in large figures. When we hive the swarm (always on full sheets of wired foundation), we place it close on the north side (our hives front the east) of the old colony, with the entrance turned northward, away from the old colony, about 45°. As soon as the swarm is well at work, having their location well marked (say two days), we turn the hive around parallel with the old colony. Now both hives face east, setting side by side, and close together. Sometimes, however, being governed according to the size of the swarm, as compared to the number of bees left in the parent colony, we place the newly-hived swarm on the old stand, putting the old colony through the process above described. In fact, we do this most of the time. Now, you will remember, that while each colony recognizes its individual house, they are, at the same time, as regards all other colonies in the yard, practically in one location, or on one stand.

Now, the dates on the back ends of the hives plainly indicate that second swarming will take place in about 8 days. In about 6 or 7 days (according to season or weather) after this date on the hives, we remove the old colony to a new location.

As we do this at such a time in the day as most bees are in the field, this depopulates the old colony, giving the force to the new, leaving too few bees for the young misses to divide, and as they at once recognize this fact, they fight it out on the line of the "survival of the fittest." It may be proper, just here, to say a few words regarding how we manipulate the surplus departments of these two hives, as it may have something to do with the object in view. Let us suppose that, at the time of swarming, the old colony was working in three 28 one-pound section cases. Suppose the upper one to be ¾ completed, the middle one about ½, the lower one just started. We will put two (which two only the minor circumstances in the case can decide) on the hive when first swarmed, leaving one, and, sometimes, we get another to put with it, on the old hive. Perhaps this surplus room on the old colony also has a tendency to prevent swarming.

Getting Bees to Work in Sections.

Will Mr. Heddon please answer the following questions:

1. My bees will not work in the sections. What can I do to induce them to work in the sections?

2. How long will a colony of bees live without a queen?

3. Will you please describe fertile worker-brood? SARAH W. VEECH.

Terre Haute, Ill., July 4, 1884.

ANSWERS.—1. Before I could tell what to do to get your bees to work in the sections, I should have to know the reason why they are not already so at work. The conditions necessary are these: The colony must be of normal strength, or stronger; plenty of nectar in the flowers; free communication to the surplus receptacles, and the brood-chamber not too large. Foundation in the sections is also an inducement.

2. Bees will live several months without a queen; their vitality being much greater when queenless, either because they do not work as energetically, or that brood-rearing is very wearing; quite likely both.

3. You can tell fertile worker-brood by the elongated cells, or elevated cappings; by the less quantity of brood, its irregularity in distribution, and there being more than one egg in a cell, while other cells are empty.

Separating Bees from Surplus Honey.

For the benefit of several inexperienced bee-culturists, will Mr. Heddon please answer through "What and How" in the Weekly BEE JOURNAL the following questions: What is the most approved method of separating bees from surplus honey, and removing the combs from the hive? Is smoke available? Must the bees be brushed off? What is the best plan? Does any book explain this *modus operandi?* C. H. COGSWELL.

Virden, Ill., July 2, 1884.

ANSWER.—The old favorite method of getting the bees out of the old style of surplus receptacles was to put them in a dark room with one small opening to the light, and then the bees would desert the boxes and return to the hives. We used to practice this when we used the "honey-box" with openings at the bottoms only. The objections to the plan are, that sometimes a box will contain a queen, and then the bees will not leave, but as many from the other boxes as can get in and about the box will do so. If a little brood should happen to be in one of the surplus combs, the same result was sometimes experienced. With the cases which we now use, containing sections with open tops and bottoms, we smoke over 9-10 of the bees down, and then remove the case and shake out nearly all the remaining ones, and then put the case in a wire-screen house. We never get a queen off, and have no brood in the small sections. The few remaining bees at once desert the cases and go to the wire, when the whole of two sides of the screen house is opened, and the bees put out at once, and the doors immediately closed. In old times we used to number our boxes and hives, so that when a queen was found we would know where she belonged. I think all the books on apiculture speak of this subject.

Weak Colonies.

Which is the best time to double up weak colonies, *i. e.*, break them up and put the bees in with other colonies that are weak?

Freeport, Ill. J. GOCHENOUR.

ANSWER.—This is a practice that I very seldom use. If I did unite colonies, I should do it either for wintering (when they were very weak) or for the surplus harvest, when they were too small to build comb to advantage; were I running for extracted honey, I should not unite colonies at all. Weak colonies give me as much extracted honey in proportion to the number of workers as strong ones; often more. They often come through the winter in the best condition.

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Quantity Small, Quality Good.

The clover bloom here is about over, and although there was an abundant bloom, and plenty of honey while it lasted, the amount of honey gathered from it is very small. On account of the hard winter and cold, wet spring, bees were in poor condition to work in sections when clover bloom came; and as it lasted only 4 weeks, it took the bees all this time to build up; and as swarming commenced as soon as numbers increased, very little time was given to surplus storing. Bees that were packed in chaff all winter and cared for during the spring, have gathered a good harvest of honey. However, the honey crop in this locality is not as large as it was last year, but it is of very good quality.

J. G. Norton.

Macomb, Ill., July 5, 1884.

Increase by Division.

I commenced in the spring with 6 colonies, and now have 24—all by natural swarming. I hope to make bee-business profitable by increasing by division. I believed that method of increase impossible until I had read the book, "Bees and Honey;" and now I see that it can be done with perfect success. Here, I am the laughing stock of the whole community, as I stand almost alone in bee-culture. I am trying to get people to take bee-papers and buy books on the subject and read them. They say that all movable-frame hives are humbugs. Worrell's complete hive would be a show here. My intention is to make bee-keeping a specialty.

S. H. Burgess.

Chesser, Ala., June 21, 1884.

Death of a Bee-Keeper by Lightning

William Howlett, of Beaver Lick, Boone County, Ky., was instantly killed by lightning May 19. He was at work on his farm, and took shelter under some trees during a shower, when the fatal bolt laid him low, where he was found late on the following night. Mr. Howlett owned, at the time of his death, about 125 colonies of bees. He was a member of the North American Bee-Keepers' Society at the sessions of that body at Cincinnati and Lexington, Ky. He was a quiet, pleasant man, and leaves aged parents and a sister of whom he was the chief support. The present year proves to be almost equal in honey production to 1883. Swarms hived three weeks ago have already filled both stories of 20-frame Langstroth hives. In some instances newly-hived swarms have cast a swarm in 10 days. By the use of the nice honey-labels, and "Honey as Food and Medicine," I have built up a home market which will probably take all my crop of honey. My bee-yard presents a scene of beauty, activity and raining sweets.

L. Johnson.

Walton, Ky., July 4, 1884.

Good.

I have already taken 5,000 lbs. of honey from 46 colonies, spring count, and perhaps there are 2,000 lbs. more in the hives now.

J. S. Tadlock.

Luling, Texas, July 3, 1884.

Blackberry Jelly made with Honey.

This has been a good year so far. No time to snooze. If you want a delicious thing, get nice, ripe blackberries, get the pulp or juice free of the seeds, then take the best comb honey and do up the juice as a jelly (women know how to do it), then eat it on bread, pancakes, or biscuit. Try it.

J. E. Breed.

Embarrass, Wis., July 4, 1884.

Carbolic Acid.

Some one asks in the Bee Journal about using carbolic acid. I am using it when I remove the sections, and I find it superior to smoke in every respect. I mix half water, take a goose quil saturated with it, and put it carefully down between the sections, and the bees will go down into the body of the hive and sing a natural tune that every bee-keeper understands to mean submission. The sections can be removed without difficulty. I do not use a veil or gloves when I use carbolic acid, and the bees are not cross afterwards.

A. T. Aldrich.

Wilcox, Pa.

Shaking Bees.

I notice in one or two of the late numbers of the Bee Journal, several articles referring to shaking bees. I have had them in my apiary for 2 or 3 years, but only in one colony. I believe that they are hatched in the same hive with others, but the bees are killing them all the time. These trembling bees are quite annoying to the other bees. They seem to be a peculiar bee. At one time I thought that they were the indication of the purity of the Italians; but now I am beginning to think otherwise. My colonies began swarming on May 14, and some of them cast 3 swarms. Our honey crop will not be anything extra, this year. All the honey we will have was gathered from locust bloom, and it was the largest yield I have ever seen from that source. I would like to know whether Holy Land bees swarm and settle like the Italians. I am nearly 69 years of age, and have been a bee-keeper all my life; and I have yet to find the man who can beat me in finding bee-trees. I took a colony out of a bee-tree in the woods, recently, and it is doing well.

Col. R. Walton.

Industry, Pa., July 7, 1884.

Bark-Louse Honey Injurious.

We have had a good yield of honey. The bark-louse honey is an injury.

A. J. Cook.

Lansing, Mich., July 10, 1884.

Good Prospects for Fall Honey.

Bees wintered quite well in this locality, but the spring was rather hard on them. June 1 found them but little better than on May 1, and many colonies had entirely perished. The bees have swarmed but very little, only about 15 or 20 swarms from 70 or 80 colonies. Bees have gathered some honey; but white clover bloom, in this section, though good, was shortened up by dry weather. Bees have just begun to work on basswood, and I cannot yet tell what the result will be. The prospects for fall honey are quite good now.

R. Bacon.

Verona, N. Y., July 10, 1884.

Fastening Starters in Sections.

I have just been reading, on page 436, how to put starters in sections. There is no need of using any rosin in the beeswax. The sections should be grooved, and the edge of the foundation dipped into the melted wax until it almost melts; and then put into the groove as quickly as possible. If they are put in right they will never fall down with any kind of rough handling. With the Parker foundation fastener there is always some trouble about the foundation falling out of the sections. When it is put into the groove, it will break before it will fall out.

R. S. Becktell.

Three Oaks, Mich.

But Little Basswood Honey.

This has been a tolerably good season for honey, so far. I have 720 lbs. of honey, mostly from white clover and honey-dew. The honey-dew is dark and strong, and spoils the white clover honey. Linden is a failure this time, only about half the trees are blooming, and most of the bloom has fallen off from those that have bloomed.

Wm. Malone.

Oakley, Iowa., July 5, 1884.

Unusual Honey Flow.

We are having an unusual honey flow here. At present the hives and sections are all full to overflowing. The extractor is running almost constantly. There is a poor show for basswood, but a good prospect for sweet clover and goldenrod.

N. E. Dodge.

Fredonia, N. Y., July 5, 1884.

Honey Harvest—Wintering, etc.

The clover harvest was a poor one here. Whitewood or tulip yielded well for a few days. Basswood is half gone, and there is hardly any thing gathered from it. I am testing reversible frames, and will report as soon as time makes me capable of giving something of value. I have 6,000 in use. Mr. Hutchinson's article on "Hiving Swarms," graphically describes our ideas and exact experience for years past in this interesting and important branch of our pursuit. I think Mr. Clarke is all wrong regarding this new theory of wintering. Time and experience will show. Bees in trees about here have suffered with diarrhœa more than those in Langstroth hives assisted by the ingenuity of man. JAMES HEDDON.

Dowagiac, Mich., July 9, 1884.

Marketing my Honey Crop.

I have extracted about 8,000 pounds of honey from 160 colonies of bees, and will extract from 1,000 to 2,000 pounds more. I distributed a lot of the pamphlets on "Honey as Food and Medicine," last year, and it paid me well. E. DRANE.

Eminence, Ky., July 5, 1884.

"Colony" or "Nation?"

There is probably no branch of science in which the writers lay themselves more open to criticism than those who attempt to criticize the bee-nomenclatures of others. I suggest the word "nation" of bees, for what is now improperly called a "colony" of bees. It is not dependent upon, or in any way tributary to the colony from whence it originated; but is an independent nation or republic of itself. The word "nation" can be used wherever the word "colony" can, and is much more expressive.

Watson, Mo. R. V. MUIR.

[Nation refers more especially to people, and is, we think, entirely out of place when speaking of bees.—ED.]

Few Swarms and but Little Honey.

With an abundant display of white clover bloom from June 10 to the present time, bees in this locality have stored very little surplus honey, and as white clover is our main source from which we expect it, the present prospect looks discouraging to bee-men. Swarming has been going on since the middle of June, in a limited way. I have not had over 15 from 125 colonies that are in good condition so far as quantity of bees and honey in the hive is concerned. Although the past winter was so exceedingly cold and of long duration, yet the loss of colonies was not great; but we have never had as serious loss of colonies after mild weather began, or "spring dwindling" as it is termed, as we have experienced during the past one. The greatest loss was from robbing. On May 1 fully ⅓ of the colonies were dead that were in good condition on Dec. 1, so far as I can learn in this vicinity. Although my hives are populous and well-filled with brood and honey, I have not a box of surplus honey ready to come off yet, and most of them contain but very little, while the other bees have done nothing in boxes. L. JAMES.

Atlanta, Ill., July 8, 1884.

Poor Honey Crop.

Bees have done poorly thus far this season. The weather has been too cold and wet. My honey yield will be about 5,000 lbs. less than it was this time last year. Last season I had from 80 to 100 colonies, and the honey yield was 20,000 lbs.; now I have from 93 to 95, and have but 4,700 lbs. of honey up to this date. The bees are in good condition. P. LOUCKS.

Selma, Cal., June 28, 1884.

Wild Bergamont.

I send to Prof. Cook a flower a man gave me, saying that it was horse-mint. What is it? Please answer through the BEE JOURNAL. J. L. WILSON.

Mortonsville, Ky.

[It is wild bergamont (*monarda fistulosa*). It is closely related to the horse-mint, as it belongs to the same genus. The horse-mint is *M. punctata*. This wild bergamont is common all through the country, from New England to Kentucky, and southward. This is the plant which I speak of in the "Manual" as being punctured by the wild bees (Carpenter bees); and when thus punctured the bees utilize the honey. The flower tubes are very long.—A. J. COOK.]

Storing Honey Rapidly.

My bees are doing well, but were late in commencing. They seem to be storing up honey from white clover at a rapid rate. I have had but few swarms, and none of them absconded, though many of my neighbor's swarms have "gone to the woods," after staying in the new hive for 3 days. L. E. BROWN.

Eminence, Ky., July 7, 1884.

Remarkable Season.

Our honey harvest closed about two weeks ago, and I have to report about ⅓ to ½ of a crop of very excellent clover honey. The season has been a remarkable one. The first 16 days of the white clover bloom were excessively wet, and some days cool, during which, a few intervals of warm sunshine, bees gathered sufficient honey to stimulate them; then followed 9 or 10 days of as fine honey weather as I ever saw, and the bees stored a considerable quantity of very fine honey. We then had cold, drying north and northeast winds for more than a week, when honey gathering ceased, and comb-building was abandoned entirely. We had a few more days when the atmosphere was moist and warm, but clover was almost gone; and yesterday morning a dry, northwest wind cooled off all aspirations for a continuation of any further surplus gleanings from white clover. My bees, both hybrids and Italians, have worked on red clover the whole season. E. DRANE.

Eminence, Ky., July 7, 1884.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 14, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The honey harvest is now virtually over, in this part of the country, and the yield is below the average of former years. The average, per colony, in Ohio and Indiana is, perhaps, 30 to 40 lbs.; in Kentucky it may come up to 100@110 lbs. per colony. I can only speak from observations obtained so far, and my figures may not be entirely reliable. Sugar being cheaper than it has been, perhaps, for the last 20 years, we cannot expect honey to be high; but there was a short crop, and it would be my advice to bee-keepers not to be in too much of a hurry to dispose of their product. The demand for extracted honey is fair, and to all appearances, gradually improving. It brings 6@9c per pound on arrival. There is a small demand for comb honey, but we had small offers only, and a good deal could be sold. It brings 14c per pound on arrival.

BEESWAX—Offerings plentiful at 30@32c on arrival. C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—Present sales of comb honey are slow, and will be until the new crop arrives. We quote: Fancy white 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market. Extracted, white, 8@9c.; dark and buckwheat, 7@8c.

BEESWAX—Prime yellow, 34@35c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—This week we have had liberal receipts of comb honey, and the prices are irregular. As a rule, the honey is of first quality, and put up in good shape; a gradual improvement is noted in this respect. Prices range from 14@16c for the best; occasionally a case sells for more than that, but it is in a retail way. The extracted honey is still sluggish, at nominal prices—6@8c per pound.

BEESWAX—Fair receipts; prices, 30@37c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Receipts are on the increase. Buyers manifest no anxiety to operate. Prices are largely nominal. There is every indication that low figures will be necessary to effect a free movement this season. White to extra white comb, 15@20c; dark to good, 10@13c; extracted, choice to extra white, 5@7c; dark and candied, 4@5c.

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—No change to note in prices. As predicted in last report, the temporary activity was only accidental, and last week has been dull. Some little new honey is now arriving, but it fails as yet to tempt buyers to any extent. I look, however, for a very large demand a little later, and would suggest shipment by Aug. 1, of all that is ready in quantities to justify. I have still a few more "Suggestions on Packing and Shipping Honey," to mail free on application. I will also furnish shipping stencils free to any one desiring to ship to me.

BEESWAX—Nominal, at 30@35c.

JEROME TWICHELL, 514 Walnut Street

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 17@18c; extracted, 7½c.

GEO. W. MEADE & CO., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5. or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the Bee Journal as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly Bee Journal and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

☞ Do not let your numbers of the Bee Journal for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey," (only 50 cents per 100) or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy 5 cts,; per doz., 40 cts; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Young Men!—Read This.

The Voltaic Belt Co., of Marshall, Mich., offer to send their celebrated Electro-Voltaic Belt and other Electric Appliances on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred, as thirty days trial is allowed. Write them at once for illustrated pamphlet free. 6D1y

The Monte-Cristo Series.—Foremost among the best and most absorbing novels of the season are, "The Wife of Monte-Cristo," "The Son of Monte-Cristo," and "The Countess of Monte-Cristo," just published by T. B. Peterson & Brothers, Philadelphia, but already pronounced successes. These fine romances, fully worthy of Dumas' pen, appropriately conclude that celebrated novel, "The Count of Monte-Cristo." All the characters figuring in Dumas' masterpiece, the Count himself, his Wife Haydee, his Son Esperance, Mercedes, the sweetheart of Edmond Dantes, and all the rest, are introduced. These books literally overflow with exciting episodes.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	..	$2 00
Conqueror smoker (wide shield)	3 "	..	1 75
Large smoker (wide shield)	2½ "	..	1 50
Extra smoker (wide shield)	2 "	..	1 25
Plain smoker	2 "	..	1 00
Little Wonder smoker	1¾ "	..	65
Bingham & Hetherington Honey Knife, 2 inch			1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
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1884. JOSEPH D. ENAS, 1884.

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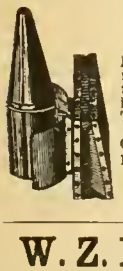

BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Mich.,

can furnish pure Italian Queens, reared under the swarming impulse, in his own apiary, at $1.00 each. Make money orders payable at Flint, Mich. 29Atf

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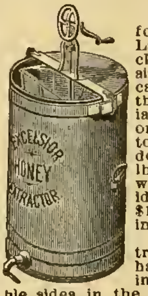
EXCELSIOR
HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

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For 2 American frames,		13x13	inches	..........$8 00
For 2 Langstroth	"	10x18	"	.... 8 00
For 3 "	"	10x18	"	..........10 00
For 4 "	"	10x18	"	..........14 00
For 2 frames of any size,		13x20	"	..........12 00
For 3 "	"	13x20	"	..........12 00
For 4 "	"	13x20	"	..........16 00

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923 West Madison Street, Chicago, Ill,

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HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

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What to Eat,	Parasites of the Skin,
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INSTRUCTION IN BEE-KEEPING.

BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive: every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

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18C7t 20D12t

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And Choice Queens a Specialty.

Circulars and samples free. Send for them. It will pay you to do so, before ordering elsewhere. Wax worked on the Given Press for 10 to 20 cts. per lb., according to the number of square feet to the pound.

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2geowtf PINE PLAINS, N. Y.

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HONEY AND BEESWAX,

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I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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Everything fully up with the times, and

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$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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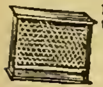
COMB FOUNDATION,



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Sprout Brook, Mont. Co., N. Y.

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Square Glass Honey Jars, Tin Buckets,
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FDN. MILLS. 10 INCH $15.00
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11Atf

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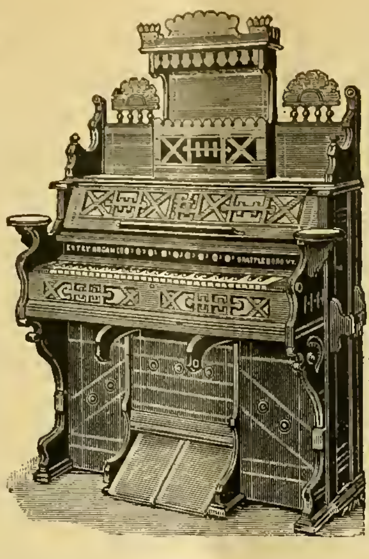
AND BEES.

Dollar Queens, 90c.; six, $5.00; twelve, $9.00. Warranted, $1.50; tested, $2.50; selected, 25 cents extra. Warranted pure. Order now and get choice Queens. Send money by P. O. Order, Registered Letter, or American Express.

27Atf **N. F. ASHTON, Davenport, Iowa.**



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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

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Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.
Price, 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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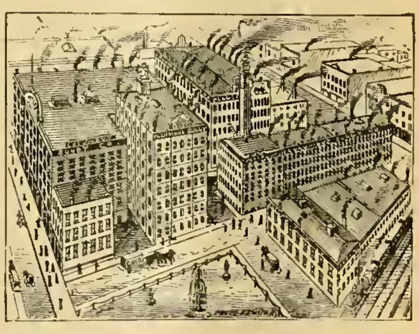
Buggies, Phaetons, Light Carriages, Surrey Wagons,



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American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

1868. 1884.

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COLUMN.

BEST GIVEN
COMB FOUNDATION.
Wholesale and Retail.

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I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

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I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!
Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices :

Tested, to breed from	$ 3 00
Untested	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

QUEENS!
BY RETURN MAIL,
FROM OUR NEW STRAINS OF
ITALIAN AND ALBINO BEES.

We are happy to announce to the bee-keeping public that we are now prepared to send you QUEENS on short notice, at the following low rates :

Untested, each	$ 1.00
" per ½ dozen	5.50
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" per ½ dozen	6.00
" per dozen	11.00
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Send for our descriptive Price-List and see what our customers say of our goods.

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COLERAIN, MASS.

(The oldest breeders of Italian Bees in America.)
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(ESTABLISHED 1860.)
163 South Water St., CHICAGO,

COMMISSION MERCHANTS!
Make a Specialty in HONEY.

Consignments solicited. Will make liberal advances on shipments. Refer to Hide and Leather National Bank. 10Btf 29A13t

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APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

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Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

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1ABtf HOOPESTON, ILL.

WE CALL

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> "I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
>
> GEO. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

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18A13t 6B3t

Early Italian Queens!
IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

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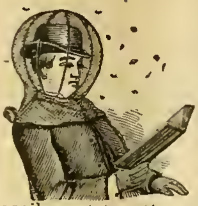
A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

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A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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Pure Italian Bees and Queens

Fo further information, send for Circular.
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Italian—untested—not warranted, in May and June, each	1.00
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Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
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Automatic Honey Extractor
AND SMOKER.

Send for descriptive Circular and Prices to

G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

COMB FOUNDATION MILLS.

The "Best" and "Cheapest" in the market. Send for Sample and Price List free.

PAUL SPOERKE, Fond du Lac, Wis.
14Dtf

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23D4t A. WORTMAN, Seafield, White Co., Ind.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY

BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., July 23, 1884. VOL. XX.—No. 30.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

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☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

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To Australia—Weekly, $1; Monthly, 24 cents.

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THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

* * *

☞ The Gibson County Bee-Keepers' Association, will meet at Trenton, Gibson Co., Tenn., on Aug. 2, 1884. A good attendance is expected.

T. J. HAPPELL, *Sec.*
J. W. HOWELL, *Pres.*

* * *

☞ The meeting of the Bee-Keepers' Association of Northeastern Kentucky, will be held in the city of Covington, Walker's Hall, on Aug. 13, 1884. G. W. CREE, *Sec.*

THE AMERICAN BEE JOURNAL

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00..	
and Cook's Manual, last edition (in cloth)	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)	2 75..	2 50
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping	3 50..	3 25
Langstroth's Standard Work	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing	3 00..	2 75
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees	2 75..	2 50
King' Text Book	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
British Bee Journal	3 75..	3 50
The 7 above-named papers	8 25..	7 00

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

* * *

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

* * *

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Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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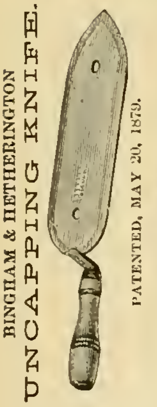
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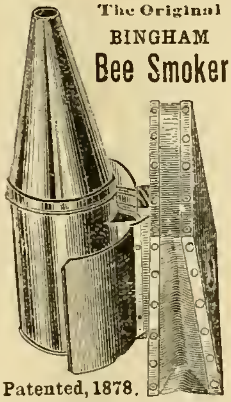
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The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English or German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom. Less than 200 will have a blank where the name and address can be written.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

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Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

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Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way to rear Queens, etc. Price, **$1.00.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **50c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JULY 23, 1884. No. 30.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOF AND PROPRIETOR.

Work Up the Local Markets.

Do not fail to try to work up the local markets for honey. This not only helps to increase consumption, but also adds to the profits of the honey producer—by obtaining a larger price at retail than by selling it at bulk to middle-men in large commercial centres. By saying this we are in no way underrating the valuable services of wholesale merchants in cities, for there is always enough comes to such places to stock that market, and by selling more at retail, it will keep from overstocking such markets, and thereby depreciating the salable value of the product.

We can do the producers no better service, therefore, than to advise them to work up the markets in their own immediate neighborhoods. To do this, get some "Leaflets," or "Honey as Food and Medicine," with the producer's name and address printed on them, and scatter them over the territory that can be supplied. Try this plan, and see how it will astonish you by its results.

* * *

☞ We have received a very nice sample of one-pound dovetailed section for honey from Julius Tomlinson, Allegan, Mich., and placed in the Museum.

* * *

☞ We have just issued a new edition of Doolittle's "Hive I Use," to which is now added a detailed statement of his system of management for producing comb honey in the largest quantity and best quality, and how to put it up in the most desirable manner for the market. It contains 16 pages, and the price is 5 cents.

Missouri's Honey and Bee Show.

We have received the Premium List of the Inter-State Exposition at St. Joseph, Mo., to be held Sept. 1-6, 1884. We notice that Mr. E. T. Abbott is the Superintendent of the Bee and Honey department. With the following liberal list of premiums, there ought to be a very large bee and honey show:

	1st Pr.	2d Pr.
Best colony of Italian bees................	$10	$5
Best colony of Carniolan bees............	10	5
Best colony of Syrian bees...............	10	5
Best colony of native bees...............	5	3
Best display of imported queens.........	10	5
Best display of queens reared by exhibitor, and with progeny..................	10	5
Best display of the habits and economy of a colony of bees.....................	10	5
Best display of honey in comb, not less than 75 lbs..............................	10	5
Best display of extracted honey not less than 50 lbs..............................	10	5
Best display of honey in various and fancy forms.............................	10	5
Best display of beeswax................	2	1
Best display of honey-producing plants, including stalks, flowers and seeds, all labelled with name........	5	.3
Finest bouquet of honey plants...	2	1
Best comb-foundation machine, to be operated on the ground.................	10	5
Best honey extractor...	3	2
Best wax extractor.......	2	1
Best bee smoker............................	Diploma	
Best section box for comb honey	Diploma	
Best comb foundation......................	Diploma	
Best bee veil	Diploma	
Best honey knife...........................	Diploma	
Best keg for extracted honey............	Diploma	
Best bee feeder............................	Diploma	
Best queen cage...........................	Diploma	
Best drone trap............................	Diploma	
Best display of apicultural literature....	5	3
Best hive for manipulation, procuring comb and extracted honey and winter protection	10	5

* * *

☞ Mr. William P. J. Gerow, of Patterson, N. Y., died on April 21, 1884, aged 23 years. He was a successful and progressive bee-keeper, and will be missed in that locality.

* * *

☞ German Bee-Keepers will be pleased to know that we have just issued a new and enlarged edition of our pamphlet on Bee-Culture, *in German*. It is revised and brought down to the present time, in all the developments of our rapidly-advancing pursuit. The Price being only 40 cents, it is within the reach of every German bee-keeper, and should be in the hands of all.

* * *

☞ Letters for publication must be written on a separate piece of paper from items of business.

The Clover Harvest, etc.

The Indiana *Farmer* of last week contains the following concerning the clover honey harvest, and the care of bees and honey at this season of the year, as well as how to protect honey from the ravaged of the moth:

The white honey harvest for this season is over. Though the flow was good while it lasted, the crop secured will be small, compared with that of last year. Bees suffered badly during the month of May, leaving them in poor condition at the commencement of the harvest. Brood combs, but poorly filled with brood, gave too much space below, in which to store honey, producing ill results especially where comb honey was the object, leaving many sections in the hives only partially filled. Should the fall flow of honey prove good, many of these may be finished, but not in the most desirable shape.

In most localities there is a dearth of honey-producing flora, from now until about the middle of August, when the fall bloom may bring a good yield. As the white clover yield ceases, bees are easily excited to robbery, and care should be taken to protect weak colonies or nuclei by reducing the size of the entrance, making it adequate to the force defending it. All work done in apiary should be carefully done, and all judicious care taken to prevent robbing. Prevention may be easily accomplished, but should they once get a start, it is sometimes very difficult to stop them.

Comb honey that has been removed from the hives, should be examined every few days. If the comb shows signs of worms, the honey must be fumigated with sulphur. Care must be taken not to give them too much, or it will discolor the comb, giving it a greenish cast. The amount used will depend, of course, on the size of the room or the box used. It requires but very little of the fumes of sulphur to destroy life, either animal or vegetable. Sulphur will not destroy the eggs, so it may be necessary to give them a second dose after all the eggs have had time to hatch. By watching closely, you will be able to discover the worms before they have done any material damage. They are very rmall at first, but you will detect their presence by seeing a small, thread-like streak of a mealy looking substance, on the capping or round the edge of the combs.

Natural Swarming

Translated from the French *Ami du Clerge* for the *Haldimand Advocate.*

In the majority of cases, the swarm will alight on the branch of a tree, on a hedge, or fence, where it will cluster, assuming the shape of a cluster of grapes. If no trees are in the vicinity of the hive, plant therein two or three branches. The hive that is to receive the swarm should be very clean. If it is an old one, it is wise to burn under it some straw to destroy the little insects that have nestled in it. The interior of the hive might also be rubbed with some odoriferous plant or flowers, such as the thyme, the rose, or with a cloth moistened with salt water. But, should the hive be clean, these precautions are not necessary. As soon as the bees have clustered, busy yourself to secure them, for fear they may escape.

Securing the Swarm. — There are situations in which that operation is very easily performed, others when it meets certain difficulties; let us speak of the principal ones. As soon as the swarm has alighted, put on your veil and make yourself ready to secure it. If it is fixed to a low and flexible branch, with one hand hold the opening of the hive under the swarm, with the other shake smartly the branch to cause the bees to fall into the hive. Immediately after, upset gently the hive and place it on the platform to facilitate the means of ingress. Disturbed by this operation, some of the bees will fly out again and return to the branch. They seem as if they would all escape. In that case smoke the bees remaining on the branch, and also those on the alighting-board which tarry to return. You may also replace the smoking by putting, where the bees are, some herbs of a strong odor disagreeable to the bees. In a quarter of an hour, all the bees have returned to the hive, and then you put it in its place without any anxiety concerning the few bees that may fly around the hive. They will work that very day. If you were to wait until the evening, they would for a few days flutter around the place where the hive was first placed.

If the swarm fixes itself to the trunk of a tree, with one hand hold the hive near them, and with the other, with the help of a brush or a feather-broom, softly and swiftly sweep all the bees into the hive. The capital point in all these operations is to secure the queen.

If the hive is difficult to handle, place it on the platform, but raised at the front a few inches with sticks or blocks: then with a shallow box or net secure the bees with the brush or soft broom and upset them gently at the opening of the hive into which they will immediately enter. If your hive is the Langstroth, take off the cover and put the bees into it, place in some section frames and some brood from other hives, and if possible, put the cover on and the operation is completed. Of course there are circumstances which may cause you to alter the way of securing the bees. A skillful bee-keeper will easily overcome such difficulties.

To estimate properly the value of a swarm, first weigh the empty hive and note it on a conspicuous part of the hive or on a register in which are inscribed numbers corresponding to to those of your hives. In the evening or the next morning, weigh the hive with the bees; if its weight is four pounds over the weight of the empty hive, your swarm is sufficiently strong, especially if it is one of the early ones. Toward the end of swarming time and and in countries where flowers are scarce, the weight of the swarm should be from five to six pounds. Under that weight, the swarm should be increased by division. As the bees leave the hive, to swarm, they fill themselves with honey sufficient for at least three days sustenance; they are therefore heavier then than at ordinary times. Two pounds of bees filled with honey contain about 9,500; at other times in the same weight of bees, there should be nearly 11,000.

Is it possible to know wherefrom came the swarm, in case of dispute between two bee-keepers, each claiming it as his own?

Yes, this is the means to find it out. Take from a swarm where it has alighted, some fifty bees into a glass in which you shall have put two or three pinches of flour. Go thence a distance of three hundred yards and let the bees go. As a certain number will then return to their old hive, watch and it will be easy to recognize them by their bodies sprinkled with flour. This will clearly prove who is the owner of the swarm.

To what cause must be attributed the returning of the swarms or their dispersing in all directions?

Sometimes rain or a great wind will force the swarm to return, or oftener, the fall of the queen to the ground, where she loses her way, or wanders away from the swarm. Then the swarm returns, but not before it has searched everywhere with great anxiety for the queen.

One looking at such a swarm can easily guess that something is missing. In such a case, search carefully in front of the hive, and you will find the queen crawling among the grass where she fell, or struggling to free herself from some snare in which she may be held a prisoner.

What is to be done in case two or more colonies swarm at the same time and cluster together?

Be very careful not to separate them, since all profit of the bee-keepers consist in strong colonies. However, as in everything, excess is bad; should four or five swarms unite, you may divide them into two or three colonies and pick out the queens separately to give one of them to each colony.

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☞ A Canadian wishes us to state in the Bee Journal, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

Adulteration a Curse.

The following taken from the *Northwestern Grocer*, shows more forcibly the general feeling among traders concerning adulterations than anything which has been written for some time upon the subject:

Few men are so destitute of conscientiousness as not to feel, in their inmost soul, a sense of shame and wrong-doing when they adulterate goods of any kind; but especially when they offer to their fellows as food and drink what they have corrupted, defiled, debased, contaminated, vitiated. They may say, when pushed to the wall, "the food and drink we offer is pleasant to the eye, grateful to the taste, wholesome and nourishing to the stomach, and we do the recipient no injury." But at the same time he is conscious that when he adulterated his goods he did it, not for his neighbor's good, but for gain—to add to his own profits. He diluted and debased what he sold to gratify himself and not his neighbor, and in so doing he violated the golden rule: "Whatsoever ye would that men should do to you, do ye even so to them." Every common-sense man and woman in the land despises the person who deceives and defrauds them. This is so obviously the case that we pause neither to prove, argue or illustrate the assertion. If we have a reader who questions the proposition, he has lost one of the choicest jewels of human nature, and that is self-respect. When men or women lose their self-respect, reformation and improvement are works not easily accomplished. So long as we respect our humanity there is hope for us; but when we tamely submit to allow men to palm off on us, roasted barley, peas, corn, sweet potatoes, acorns or even chicory for Old Government Java or even Rio coffee, without a spirited protest, then are we beginning to trifle with our self-respect; and the villains who, in their dungeons and dens of infamy, thus practice on the credulity and ignorance of weak humanity deserve a higher and deeper reprobation than the counterfeiter of greenbacks, or the adulterator of our national gold and silver coins.

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☞ The summer meeting of the Lorain County Bee-Keepers' Association will be held in the Court House at Elyria, Ohio, on Wednesday, Aug. 6, 1884. O. J. Terrell, *Sec.*
North Ridgeville, O.

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☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. Allen, *Sec.*

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☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on the third Tuesday in August, at Leroy Highbarger's, near Adaline, Ogle County, Ill.
J. Stewart, *Sec.*
Rock City, Illinois.

CORRESPONDENCE

For the American Bee Journal.

Shall we Breed Hybrids?

JAMES HEDDON.

I have no barren statements to offer. I conceive that the mind of the bee-keeper of to-day would relish something in accord with his present knowledge of bee-culture. An assertion of what I am doing, and have done, still falls upon the ear of the most credulous as merely an assertion. I wish, if possible, to convince the reason of every reader. My preference for hybrids, or crosses between the best strains of German and Italian bees, is based upon certain facts, many of which are well known to the reader of less experience.

Did you never think it strange that the product of two races of bees should, as a rule, possess certain traits in a more radical degree than either parent race? Apropos to the above, do you not distinctly remember that the decisions of bee-keepers have been largely in the majority—that hybrids, crosses between Italian and German bees, were excellent honey gatherers? equaled by few and excelled by none; but oh! so universally cross.

Just why it should be a rule that this product possessed more belligerency than either parent, attracted my attention some years ago. I first built up a theory to account for the enigma, to which by fitting every day facts, I proved to my own satisfaction to be correct.

My first proposition is, that we have but two distinct races of bees—the dark, and the yellow; and second, that the yellow race of bees possess much the most belligerent disposition.

A thousand voices will now ask, "Why has the black bee been called the crossest?" I will try to explain. If you receive 3 or 4 stings during the manipulation of 10 colonies of dark or German bees, and only one sting in handling the same number of yellow colonies, would you not arrive at the conclusions so unanimously declared by bee-keepers of the past? Still, a mistake has been made. In opening a hive you are very rarely stung by bees that do not take wing. A well known and marked characteristic of that branch of the yellow race, known as the Italians, is, that compared with the dark or German bees, they are very tenacious of their foot-hold on the combs and in the hive. I think I am safe in saying that during the manipulation of a colony, from 8 to 10 times as many bees take wing when handling the German bees as would when handling Italians.

Now, as the proportionate number of stings received is not one-half as much against the German bees as their greater proportion are in condition to sting, here is an argument of two to one in favor of the good-nature of the Germans; but here are more arguments based on what your experience has already taught you. There are ways to test the disposition of bees when on the wing—ways which we all use of necessity. Apply smoke equally to the races under equally unfavorable conditions, and while the Germans mind its admonitions and give up at once, the Italians seem to "lay back their ears" preparing for battle, as soon as the fog clears away.

Another way: When it is too cool for bees to fly, if you approach a hive carefully (I mean in the winter), and cautiously pull back the cloth cover, black bees, as a rule, will show no resentment, while Italians will tip up their posteriors and thrust out their stings. By the worst of treatment arouse a colony of Italians till they take wing quite freely, and you have nothing worse to fear from blacks.

It seems that the offspring of these two races, as a rule, inherited about equally from the dispositions of the parents, while those crosses coming from the little blacker, German strain, and the bright, yellow Italians were most sure to partake of the light-footed, take-wing tendency. Does this not account for the fact that the hybrids were, as a rule, worse to handle than either parent race in its purity? Does it not also account for the ferociousness of the Cyprians? They possess to the full extent the inate meanness of the yellow race and light-footedness of the blacks.

Now, if you will rid your apiary of all German bees, except the larger brown variety, and of all the yellow bees except the leather-colored Italians, you will find cross hybrids largely in the minority. You will find that most of your hybrid colonies are as good-natured as any bees you ever saw, and standing well up to, or above the reputation given them by the bee-keepers of the past—as being par excellence as surplus honey producers.

You must not forget that this most valuable strain is not a fixed race; that it is liable to sport from one "side of the house" to the other; *i. e.*, strongly show the tendencies, sometimes of one parent and sometimes of the other. They will rarely fall below the aggregate worth of either parent. This sporting tendency gives a most excellent opportunity to breed for qualities. Were I keeping either race in its purity, I should always breed for qualities, rearing my queens from my best colonies, which produce the largest quantity of surplus honey, and good behavior as one of the main points of valuation. No matter whether you have purchased a queen, and are breeding for Germans or Italians in their purity, or their crosses in their excellency, if you do not direct their breeding, rearing your queens from your best colonies, you will fall behind those who do, and you will always need to purchase queens from them.

For the benefit of many who are now breeding from hybrids, let me say that it is my advice to breed from the greatest honey-gatherers, and always such bees as stick to the combs in the good old-fashioned Italian style. I want no Cyprians or Syrians to knock at my apiarian gate, unless they are possessed of the fast-footed tendency. I cannot admit such a queen, even though she came mantled in a ten-dollar greenback.

My opinion is, that very many who suppose that they have "good-natured Cyprians," have only Italian bees. If we find such radical differences in disposition of different colonies of the new races, as is reported from those who think that they have the pure Cyprians and Syrians, then surely there is little fixedness to be found in these new races. Next to the crossed strain of bees above described, I prefer the leather-colored Italians in their Simon-purity. Early and late brood-rearing are now being proven to be injurious qualities. My students will tell you that our 45 colonies that could not breed at all till they gathered the pollen of 1884, notwithstanding they ceased breeding early last autumn, are now the strongest colonies we have in our yard; and every one has been the pink of health for a year past.

Would that I were as sure of an 1884 fall honey-crop as that the introduction of the Cyprians and Syrians into this country has been a serious draw-back to our business. I have tried to appeal to known facts and reasons, asking you to take therefrom nothing for granted. How well I have succeeded, I leave the reader to judge.

Dowagiac, Mich.

* * *

For the American Bee Journal.

The Honey Crop in Texas.

B. F. CARROLL.

This part of the State of Texas has been truly blessed with another grand honey flow. About June 1, as soon as the terrible floods subsided, our bees began to work on the mint. At that time I had 50 full colonies set apart for honey gathering, and the balance, all weak colonies, were broke up into two and three-frame nuclei. I put supers on a few hives, and as I had 40 acres in wheat and oats, 23 acres in corn, and 20 acres in cotton and millet, I had my hands full. I hired a man to run the farm, and I would run the bees; but he quit me about the time I was badly needed in the apiary, and I got fearfully behind.

I offered $2 per day for a hand to work at the extractor, but none could I get. I finished my grain crop and let the cotton go, and began running the extractor. By this time all the hives were full, and the honey well sealed over. In two weeks I was up with the bees, but lost over 4,000 pounds of honey. I took a little over 6,000 pounds of extracted honey, and a few pounds of comb honey. I will get about 1,000 pounds more, making an average of about 140 pounds per colony. My big colony swarmed, and the old queen went to the woods. A second swarm gathered 100 pounds; the old colony 277 pounds, making 377 pounds; and if I could have saved the first swarm, I could have taken from them over 200 pounds. The honey flow is not yet over, and it may yet average nearly 200 pounds per colony.

The honey taken is very fine, weighing 12¼ pounds per gallon. I use spruce and cypress wood kegs, holding 5 and 8 gallons, and find them to be better than tin vessels, and much cheaper. My bees are pure Cyprians. and some colonies did not like the feather brush, so on these I used the tops of the camomile weed, and found it did not make them so hostile. After working four years with the Cyprian bees, I can truthfully say for them that they are the best bee yet for our hot, windy prairie country, and I think they will do well anywhere in the South. Heddon's "pollen theory" is certainly correct. I will soon give my experience on this subject.

Dresden, Texas.

For the American Bee Journal.

A Plea for Pollen.

DR. G. L. TINKER.

The recent report of the costly experiments made during the past winter by Mr. Heddon in support of the pollen theory, as anticipated, brings to light no facts not already reported by Prof. Cook, who several years since made many careful experiments in wintering bees on sugar syrup, and which proved clearly enough that cane-sugar is a better winter food for bees than the natural stores; but those who hold that thereby the theory is also proved, are taking much for granted.

There are too many questions involved to be settled by a single line of experiment. The theory is not only *not* proved, but it is far from being advisable to reduce it to practice, although our friend is so very confident that it is all right. I am pleased that he is so; but trust that he will not think Mr. Corneil, myself and others, obstinate in our opposition, because we believe the theory inadequate to cover the facts which he alleges.

The experiments required to be made to prove anything at all, must exclude honey entirely; and the stores be confined to sugar syrup and bee bread in a hive properly prepared for winter; but after these have been made, there will still remain the great question of the primary cause.

Now, Mr. Heddon talks to us very familiarly about the causes "auxiliary to the cause;" and it has become interesting to learn how he knows which is primary and which secondary. Of course we know that there is no *first* cause, scientifically speaking, and hence we are to consider only those causes or conditions which may be controlled or modified by the hand of man.

First of all it will be noted that Mr. Heddon places much stress upon the unity of the cause of bee-diarrhœa. This he is obliged to do if he would substantiate the theory. It must not only be a cause, but the one great cause. It will hardly do to admit so many auxiliary causes, lest some one living in the South might suggest that, notwithstanding all the pollen, bees winter tip-top down there. As cold is the principal factor here in the North, not experienced by our Southern friends, it strikes one that cold as "the greater auxiliary to the cause," is assuming too much, and liable to turn out as with one of our own politicians, who, before the ballots were counted, always claimed everything with confidence.

My investigations of the cause of bee-diarrhœa prove what Prof. Cook, Mr. Doolittle, and a host of other able observers have found, viz: that "restlessness," "excitement," or "undue activity" of the bees in winter quarters are the first symptoms of the disorder. On the contrary, those colonies which remain quietly clustered upon the combs and have enough to eat, usually winter all right; but if they become restless there will soon be a demand for nitrogenous food to supply the waste of tissue. If, now, they cannot void themselves in confinement as held (which, however, is not yet clearly proven), then the indigestible particles of the bee-bread consumed, together with the excretion of the worn-out or effete tissues (which, as one of the adjunct causes of bee-diarrhœa, completely dwarfs that of pollen), may accumulate, after a time, in quantities producing serious harm. It would, however, be a great mistake to suppose that the accumulations are the cause of the restlessness, since it is certain that bees do eat pollen all through a long winter confinement, and yet winter well. This fact is now well established, as pollen husks are always to be found in the intestines of bees in winter confinement; but no trouble comes from slight accumulations. It is only, when, as in such a winter as that of 1880-81, bees are obliged to consume inordinate and almost unprecedented quantities of both honey and pollen to keep life in them, that these harmful accumulations arise.

If restlessness, then, causes the bees to eat too freely of pollenized food, it ranks as a prior cause; and the most that could be held is, that the latter may be an auxiliary cause, while restlessness, as the effect of cold, humidity and confinement, one or all, must stand as the primary cause or causes amenable to the hand of man. I am, therefore, unable to see the propriety of excluding the bee-bread from the bees in winter, but think that we should provide against the primary causes; and I shall hold that the latter policy may be more economically executed than the former, and that it is practicable, effectual in results, and consistent in theory.

To prevent the consumption of too much pollen by the bees, under adverse conditions, it would be necessary to exclude nearly all of it from them, which measure will certainly require more "fussing" than most men will care to give their bees. It will not be enough to limit the amount to one-half or one fourth of the ordinary quantity stored; for the colonies dying of diarrhœa, do not eat all their bee-bread, but leave large amounts of it.

Again, Mr. Heddon has given one case which died of diarrhœa, as he states, caused by eating from only one comb; and yet, when he examined it, it was "nearly half full of bee-bread." As this comb undoubtedly contained some honey, and also a patch of brood "as large as a man's hand," in the fall, how much bee-bread, think you kind reader, does it take to kill a colony of bees? According to this showing, a few dozen cells of it is ample to kill any colony, other things being favorable. It is plain, therefore, that it will be impracticable to exclude it in such amounts as to insure safe wintering; unless, indeed, we come down to the use of "tooth-picks."

There are bee-keepers living farther north than Mr. Heddon, and who winter, year after year, a great many more colonies, and with almost no loss at all. Wintering is no trick for them; bee-bread in the hives in winter gives them no concern, and they seldom have a case of bee-diarrhœa. That their methods are not practicable and efficient, there is no doubt; and that all other bee-keepers may be equally successful, there is also no doubt. Could Mr. H., therefore, give us a practical method of excluding all pollen from the hives in the fall, it would offer us no advantages in wintering not already possessed, even if his method of wintering would always prove safe, which is not now, has not been in the past, and will not be in the future.

On page 171 of the BEE JOURNAL for 1881, is a report by Mr. Wilber which is especially commended to Mr. Heddon's consideration. The report, like all others that I have read on the use of sugar syrup, is, on the whole, favorable against the use of natural stores. In this case, however, one of the sugar-fed colonies wintered in the cellar, died of "dysentery," and two of those wintered on the summer stands, died; but they "were the only ones that died without the dysentery."

In view of such a report as this, of what was clearly a carefully made test, who will say that, if we had had such a winter as that of 1880-81, Mr. Heddon would not have lost one-half of his 45 sugar-fed colonies; and that, too, not from diarrhœa, but from another trouble not less to be dreaded, viz: *restlessness* under the smarting effects of bitter and prolonged cold in a damp, devitalizing atmosphere? It is plain that, if bees get restless from any cause, and they have not access to bee-bread or other nitrogenous food to supply waste of tissue, there vitality will be speedily exhausted.

I shall repeat, therefore, what was stated a year since: that I believe that the pollen which bees consume in winter, is essential to their welfare, and never detrimental, except when the force of circumstances compels them to eat not only more pollen, but more honey than the vital powers can endure.

This being true, should we not give bees better winter protection. better ventilation, and more of that "highly oxygenized food"—sugar syrup—which is found to be so much better than honey to aid the bees to withstand our inclement winters? We may take from them the combs containing excess of bee-bread, and return them as soon as they have need in the spring, and especially if it takes up needful room for other stores; but to undertake to prevent the storing of pollen, or to remove it after it is stored, as contemplated by Mr. Heddon, will be just so much loss, at the rate of $1 per pound (which is the value placed upon it by an eminent authority), while the compensating advantages of the prevention or removal do not yet appear.

We often have bad spring weather, when the bees cannot gather the needful supplies of pollen to enable them to breed up in time to take advantage of the yield of white clover. We can well imagine Mr. H. with his pollenless bees, under these circumstances, and what would be the result of it. For my part, I have never seen too much bee-bread in my hives, and never expect to. When the combs are well filled with it in the spring, it is soon gone, often long before fruit bloom, which I consider chiefly valuable to our bees, only because of the very large amount of pollen collected from it.

The past spring I had one colony which had been built up from nuclei last fall, which, it seems, had little pollen but plenty of honey and sugar-syrup. After a time, I wondered why they did not breed up faster, and I suspected that the queen was worthless; but upon examination, I found that they had not a particle of bee-bread, and had not been able to collect enough pollen before fruit bloom to fill one comb with brood. The result was, no surplus from this colony.

In conclusion I cannot refrain from commending to Mr. Heddon the very valuable advice given by Rev. Wm. F. Clarke, in the closing paragraphs of an article on page 364 of the Bee Journal for 1884.

New Philadelphia, O.

For the American Bee Journal.

Central Illinois Convention.

A bee-keepers' association was formed at Jacksonville, Ill., on July 12, 1884, by the adoption of a suitable constitution and by-laws, and the election of the following officers: Capt. Henry W. Hitt, Merritt, Ill., President; Jno. W. Bowen, Jacksonville, Ill., Vice-President; Wm. Camm, Murrayville, Secretary; G. F. Middleton, Jacksonville, Ill., Treasurer.

Some discussion arose as to the name of the new society, but it was finally decided to call it the "Central Illinois Bee-Keepers' Association;" though some members thought that there was a society at Bloomington styled the Central Illinois; yet it could be changed if such proved to be the case.

It was intended to include the bee-keepers of Scott and Morgan counties only, but J. M. Hambaugh, of Brown county, desired that others be allowed the privilege of joining; so it was decided to accept all without reference to the county in which they lived.

An interesting discussion arose as to prices of honey and prospects for honey crop. It seemed to be the opinion of all that the flattering prospect for a large honey crop, this year, would not be realized. Nearly all reported that white clover was still plentiful, but few bees working on it; and that the bees were cross and inclined to rob. Adjourned to meet on July 26, 1884. Wm. Camm, *Sec.*

H. W. Hitt, *Pres.*

For the American Bee Journal.

The Report of the Honey Crop.

W. H. STEWART.

While we question the correctness of some reports, we are forced to admit that sometimes one, or may be 6 colonies out of 50 or 100 do produce wonderful yields.

On page 115 of the Bee Journal for 1883, Mr. Doolittle states that he obtained 566 pounds from a single colony that did not swarm, and was not divided; but we notice that this colony was one of many in the same apiary; and, although he states that it had no help from any other colony, yet we understand that the empty combs which he gave them, aided them very much.

On page 434 of the Bee Journal for 1883, Mr. Flory reports over 600 pounds from one colony; but does not state whether it was "spring count," or whether divided—making 2 colonies instead of one. If this were the case, then it would appear quite reasonable that 1 or 2 colonies should produce 300 pounds each, when kept in the same locality with many other colonies.

Again, Mr. F. does not state whether he supplied those bees with empty combs or not. It has been proven by experiment that as much honey is consumed in the production of a comb (in the natural way) as the comb will hold when finished. If this be true, then the 20 combs (Gallup combs that hold about 6 pounds each) which Mr. Doolittle gave to his colony would be equivalent to giving them 120 pounds of honey; and not only so, but the bees which were thus enabled to gather honey to fill those combs, would otherwise have been compelled to stay in the hive to build their own combs, thus very much reducing the honey-gathering force of the colony.

I am of the opinion that many bee-keepers make great mistakes in reporting that certain colonies accomplish so much more than the average. They may be correct in regard to the amount of honey taken from a colony, but in jumping at the conclusion that the colony had gathered that much from the field, is where the mistake comes in.

On page 560 of the Bee Journal for 1883, Mr. J. E. Pond has truly stated as follows: "I presume that every intelligent bee-keeper who gives his own time to the care of his apiary, has noticed that in a dozen colonies, all apparently alike and in good condition, 1 or 2 will give exceedingly good results, comparatively, while the balance will hardly come up to the mediocrity in the amount of surplus obtained from them. . . . At first I concluded that it must be owing to the superior strain of bees, and endeavored to remedy it by making such changes as would—theoretically, at least—equalize the matter; but when, the next season, I found the best colony of the previous year showing a decidedly poor state of affairs, I concluded that something besides poor stock was the cause of the trouble."

In another portion of his article, Mr. P. expresses the opinion that the reason that different colonies give such different results is, that all, or most of the bees belonging to the same colony, work in the same direction from their home, and in the same pasture; and that, as honey is found in much smaller quantities in some localities than in others, hence the difference.

Mr. P. gives the above opinion very modestly, and does not claim to have given the "whole truth, and nothing but the truth," but has given it, "hoping" to "create enough interest in the matter to start an amicable discussion in regard to it;" and at the close of his remarks on the subject, says: "Who will give the subject some attention, and the readers of the Bee Journal their views upon it?"

Mr. P. has done well in calling for an investigation of this matter, and I hope that our most able and experienced bee-keepers will at all times give, in the Bee Journal, such facts as may come under their observation. To give my views and experience in full, on this subject, would make this article too long.

Orion, Wis.

For the American Bee Journal.

Mr. Heddon's Report.

WM. F. CLARKE.

I have read the above article which appeared on page 405, with much interest, and with a sincere desire to divest my mind of prejudice. It carries, throughout, the air of a knock-down argument in favor of the pollen theory, but I submit that the proof is far from being conclusive. There is evidence, which we had long ago, that under certain conditions bees will winter well without either honey or pollen; but it is by no means demonstrated that, if there be pollen in a hive, bees will be silly enough to eat it in such quantities as to cause diarrhœa. In fact, the reverse is shown by the facts which Mr. Heddon narrates.

Only 45 colonies out of 336 were "prepared without a cell of pollen." There were, therefore, 291 colonies that had more or less pollen stored.

Seventy were not fed sugar, and these, we are told, had "less bee-bread than usual," while those that were fed, "had not one-fourth as much bee-bread as usual." Mr. Heddon gives us no information as to the consumption of bee-bread, either in the 70 unfed colonies, or those which were fed; he merely informs us that he "lost about 30 colonies by diarrhœa," but does not state any facts as to the consumption of bee-bread by the colonies he lost.

The history of the 45 colonies is not so conclusive, when you come to think it out as it might seem to be on the first blush. That 44 of them wintered well, only proves what we knew before, as I have already stated, viz: that under favorable circumstances in other respects, bees will winter well in the absence of either honey or pollen. The report on the 45th hive is open to criticism on at least two points: First, it does not appear that this colony had any more bee-bread than many of the 291 which wintered well; and secondly, though this colony had, by mistake, pollen left in it, the "pizen" does not seem to have been eaten by the bees. When the foreman examined that hive, in the fall, one comb had a patch of brood nearly as large as his hand; and when Mr. Heddon opened the hive in the spring, one comb had "a little brood," while the comb was "nearly half full of bee-bread." So, then, the bee-bread, which the foreman saw in the fall, appears to have been left untouched, for there was about the same quantity at the two examinations. Is bee-bread so fatal that its mere presence in hives will cause diarrhœa?

My comment on Mr. Heddon's report would be, that his bees were prepared for wintering with great care, and that the season happened to be of a character that most of the colonies were able to hibernate, and so, did well. There is nothing in the whole narrative to conflict with the position I have taken in regard to wintering. I would like to know what amount of stores those bees consumed. If a small quantity, then the hibernating conditions were nearly perfect; and if a considerable quantity, then the bees were only able to hibernate partially—still, hibernation was so far practical as to bring them through the ordeal in good condition.

Too much consumption of food, whether honey, sugar or pollen, interferes with normal hibernation. Establish the hibernating conditions, and they will eat the minimum of food.

Mr. Heddon does not tell us how well any of his colonies wintered, except the 44 which were prepared without a cell of pollen. Did others that had *some* pollen winter equally well with the 44 that had none? If so, what becomes of the no-pollen theory? The fact is, that whatever may be true in regard to the pollen question, Mr. Heddon's report squares exactly with my discovery, that *successful wintering depends on hibernation*. That is the key to the mystery, and I earnestly hope that every bee-keeper in the country will accede to my modest request, and prepare at least one colony for the winter of 1884-5, so that it can hibernate as it would do in a hollow-tree trunk.

I am sorry that Mr. Heddon indulges in such a contemptuous fling at "our ever-present corps of inexperienced apicultural writers." Of course, by these he means all who do not obtain their livelihood exclusively by bee-keeping. At the head of this "corps" stands the Rev. L. L. Langstroth, who gave us the movable-frame, and, at the tail, there is your humble servant, who has lately evolved the hibernation-theory, out of which, after due experiment, will come to the true method of wintering bees; and in the success of which we shall remember the "bacteria" and "pollen" vagaries of a certain experienced apicultural writer, as an illustration of the fact that "it takes great men to put forth great nonsense."

Warren Pierce's article in the same number as is Mr. Heddon's report, is a splendid contribution to the mass of proof that will soon be forthcoming to show that the problem of wintering is solved by *hibernation*.

Speedside, Ont.

For the American Bee Journal.

Facts in Regard to Wintering.

J. E. POND, JR.

I do not intend, at this time to enter into a discussion of the "pollen theory," but, instead, to give a few facts from my own experience. Discussions on mooted questions will always prove valuable, and whether the "pollen theory" is correct or not, a full and complete investigation in regard to it will aid all of us greatly, in solving the winter problem, for the reason that it must bring out facts which otherwise would not have been generally known.

I do not know that the facts which I shall recite will add anything of value to the discussion on wintering; but having wintered my bees on the summer stands for years without the loss of a single full colony, possibly these facts may prove of some interest.

Last fall I prepared 2 colonies for winter by selecting and giving to them such frames as contained the largest amount of pollen of any that I could find. I should judge that at least ¼ of the cells in each frame contained more or less pollen. These 2 colonies were of fair size, and covered 6 Simplicity - Langstroth frames. They were both put in single-walled Simplicity hives, with division-boards on each side of the frames; a "Hull's device" over the frames, covered with a thin woolen blanket, and the upper story filled with forest leaves; the cover having inch holes in each end for ventilators. An entrance ⅜ of an inch wide by 6 inches long was also given them.

My other colonies were prepared for winter in much the same manner; the only real difference being that I took no particular pains in regard to pollen, and giving them such frames as I had containing sufficient stores. In preparing the frames for winter, I always begin as early as Sept. 1, and so arrange them that at least the upper third part of each frame is filled with capped stores; thus giving food enough in a situation where it can be reached at all times, no matter how severely cold the winter may prove.

The result of my experiments was, I did not lose a single colony; that none of them showed any signs of bee-diarrhœa; but that the 2 wintered on what ordinarly would be called an excessive amount of pollen, came through in the best condition of any. Brood-rearing having begun early, one of those colonies gathered 72 pounds of honey from apple bloom.

I have no theories to advance; I simply state the facts. I am of the opinion, however, that bees prepared for winter, as an experience of years teaches me, is the correct method for my own location, will meet with a minimum of loss. I will say that if pollen is the cause of bee-diarrhœa, the 2 colonies mentioned above, ought to have been terrible sufferers from its effects.

Foxboro, Mass.

Texas State Convention.

The Bee-Keepers' Association met at McKinney, Texas, April 12, 1884, at 10 a. m. Judge W. H. Andrews, President, declared the sixth annual session called to order. He said it was now swarming time, and that the bee-keepers had now clustered and were ready to be hived. That the Association was, year after year, drawing some new member from a distance. This year we have the Cyprian from as far south as Navarro—Mr. Carroll, of that county, now being for the first time present with us—and that he hoped to see the good work go on.

Business now being in order, a motion was made by Dr. Marshall, was carried that a committee on questions be appointed, and that all members desiring to put questions to the Association, present them to the committee; the committee to select the most important for discussion, and report them to the Association. T. C. Goodner, J. S. Kerr, and M. H. Davis were appointed on the committee.

A motion by Dr. Marshall to appoint a committee on foul brood, was carried. Dr. Marshall and Judge Goodner were appointed.

Moved and carried that the Association recommend the AMERICAN BEE JOURNAL, and that it be the organ of the bee-keepers in Texas.

Report of committee on questions was next made.

1. "Should the queen's wing be clipped?" Answer by committee, "Yes."

Dr. Marshall opposed the clipping; thought it would end in a race of bees without wings. Mr. Carroll took the same ground, saying in addition, that it injured the beauty of the queen. Mr. Davis favored clipping as a means of preventing swarms from absconding. Mr. Graham opposed clipping, and did not think nature should be crossed. Judge Andrews said that the conclusion of the National Bee-Keepers' Association was against clipping. He thought there was no doubt that the bees like a queen with perfect wings the best, and that a mutilated queen was not acceptable to the bees. But did not think the clipping would ever tell injuriously on the progeny of the queen—the loss from clipping was greater than from the absconding swarms—as the queens not being able to fly, would crawl off in the grass.

On taking the sense of the Association on the decision of the committee, two members sustained it, the others against it.

2. "Does it pay the better to run an apiary for extracted or comb honey?" Answer by committee, "Extracted honey."

Report of committee unanimously adopted.

Adjourned till 1 p. m.

EVENING SESSION.

3. "What is best to plant for honey pasture?" Answer, "Horse-mint."

Dr. Marshall thought black locust a good forage. He thought lime might succeed well here; also recommended the protection of honey-locust for the benefit of bees. J. S. Kerr said he bad made some experiments with sweet clover. He thought it a good honey forage, and not dangerous to farms. Scott McKinney had observed that china or scratchberry afforded a good flow of honey, and also motherwort. Mr. Carroll had tried the blue thistle of Virginia, and considered it about as good as anything. Also pepper-wood is very excellent. Judge Andrews said sweet clover did yield honey, but not of such a quantity as to attract bees if they had anything else to go to. The Simpson honey-plant was the best honey-producer for the black land. He believed the Canada thistle would grow here, and in its native country was considered a most excellent honey plant. That honey locust and black locust should both be encouraged and protected in their growth. Raspberry, he said, made the best honey. Ratan is a tip-top honey producer; also, redbud yields a good supply of honey.

The special committee on foul brood next reported the following resolutions:

Whereas, Foul brood has appeared in our State, and is now found in Dallas and in the surrounding country, and is now spreading into other counties; and

Whereas, It is spreading with wonderful rapidity, and threatens to be one of the most fearful evils with which we have to contend; and

Whereas, It threatens, if not checked, eventually to destroy the whole industry of bee-keeping in the State, therefore,

Resolved, 1. That we urge all the friends of bee-culture to use every effort in their power to prevent its spread.

2. That we urge every bee-keeper, at its first appearance, to burn the hive in which it appears, with all its contents, believing that fire is the only sufficient remedy; and

3. That a committee be appointed to prepare a draft of a Bill in reference to foul brood, to be presented to the next Legislature, and that the members of this Convention present a copy of this Bill to the member of the Legislature from his county, and urge him to use his influence to secure its passage.

Dr. Marshall held that foul brood was the greatest evil that bee-men had to contend with. It was imported into the neighborhood of Dallas by Mr. Collin. It had spread as for south of that city as Lancaster, eight miles east, and as far west as Arlington. He had never found a remedy for it. It is never discovered until after the larva is capped over, then by the sinking of the cap. He advocated legislation that would compel its destruction as the only means of getting rid of it. A swarm of bees may run away and settle in a hollow tree in the woods, and die from foul brood, and the bees for several miles each way may carry off the honey they leave, and thus scatter the disease in all directiens. Judge Andrews had seen foul brood eight years ago in Mr. Collins' apiary at Dallas; since that time there has been no alarm, but now it is spreading rapidly, and he recommends that on first appearance the hives be destroyed solidly and effectually.

As to its appearance, there will be found a small hole in the centre of the cap. There is a very foul odor peculiar only to foul brood, and can be smelt outside the hive.

Scott McKinney gave an account of what was thought to be foul brood in Mr. Binckley's apiary at Sherman, but did not know whether it proved to be foul brood or not. Mr. West, who, it was thought, had foul brood in his apiary in Tarrant county, now gave his views. He did not know whether he had foul brood or not. About the first of February he noticed cells with caps open in the centre, thought it was chill brood. He then then found there were 12 colonies affected with it, and sent these off several miles. Thought his entire apiary was affected with it. Had checked it to a great extent. His colonies had sent out swarms. Had seen bees hatching in the hive beside it. Did not think it affected the drone or queen-cells. He burns the combs and boils the hives as a remedy. Mr. Horn advocated the boiling process with red pepper added to the water.

After prolonged discussion the resolutions were adopted. The Association then proceeded with a further discussion of the questions handed to the committee.

4. "Will it pay to rear young queens to introduce into new colonies?" Answer, "Yes." Sustained by the Association.

5. "Can more than one race of bees be kept successfully in the same apiary?" Judge Andrews held that more than one race would mix, and recommended that only one race be kept in the same apiary.

6. "Are artificial better than natural swarms?" Answer by the committee, "For increase, yes." "For honey, no." Report of committee adopted unanimously.

7. "Can a bee-keeper make a success of a one-story hive without an extractor?" "Yes," by committee. Judge Andrews thought that for the use of an extractor anything but a one-story hive would be best. Mr. Carroll thought that when there was a good flow of honey two, three and four stories were best. Mr. Cooper held that a two-story hive was best, as it gave the honey time to ripen. Judge Andrews did not believe it necessary that honey should be allowed to remain in the comb to ripen, but should be thrown out as soon as possible and ripen in open-mouthed vessels. Mr. West was opposed to two-story hives. Mr. Carroll held that to throw honey out before it had ripened, was a good way to make vinegar or metheglin; and that honey evaporated in barrels did not have the same flavor as that ripened in the comb. Dr. Marshall thought it would require an expert to throw out the honey and then ripen it; and he thought a two-story hive the best, as the brood would be disturbed in one-story hives by extracting. Judge Andrews' plan is to store honey first in open stone jars and cover with thin cloth—the temperature for ripening the honey is from 80° to 90°. Mr. Horn said he had ripened honey in 10-gallon kegs. Answer of committee sustained.

8. "Are drones from an Italian queen that has mated with a black drone, pure Italians?" By committee, "Yes." Mr. Carroll thought they would be pure. Judge Andrews thought not. Also, Dr. Marshall thought not, and that the progeny of the queen, both male and female, were affected by the mating. Dr. Howard thought the offspring a mongrel of no certain degree. Report of committee not sustained.

9. "How can one or more weak colonies be combined in the beginning of the season so as to make a strong one?" Mr. Carroll recommended placing the hives one upon the other, or make the new colony by taking frames alternately from the old ones and place them in the new hive. Dr. Howard recommended placing one hive on the other, and give both a thorough smoking, and lean a board against the front of the hive to aid the bees in marking their new locality. Mr. Wilson's plan was to put in one colony with half the frames, then a division-board; at night take out the board and smoke the bees thoroughly. Judge Andrews did not approve of removals, but if necessary, would move the hive the whole distance at once, and keep the bees in for two nights and one day.

10. "Does the amalgamation of bees produce good results?" Answer of committee, "No." Mr. Carroll thought it might possibly do so, but said we could not know it. Referred to Mr. Heddon as authority, but thinks pure stock the best. Judge Andrews held that nothing could possibly be gained

by mixing the races. Much is claimed as a superiority in bees. which is not an advantage in any way; thought the Italian the best, but would rather have a black bee than a mixed race. Those who have a large stock of bees always say (that is in the papers) that all other bees are of no account. He has found all bees to yield about the same amount of honey. Report of committee was sustained.

Adjourned till 8:30 a. m.

April 25. The Association met at 9 a. m., Dr. Marshall presiding. A motion was carried to fix the next place and time of meeting. McKinney was unanimously chosen, for the first Thursday in May, 1885, to continue two days. The election of officers for the ensuing year resulted as follows: Dr. W. K. Marshall, President; B. F. Carroll, Vice-President; Dr. Howard, Secretary; W. B. Graham, Treasurer.

Judge Andrews, delegate from the State Bee-Keepers' Association of Texas, for 1883, to the North American Bee-Keepers' Association at Toronto, Canada, made his report: He thought that his attendance of the Association was of much value, but his visit to Mr. Jones' apiary was worth much more. Mr. Jones has 2,500 or 3,000 colonies, distributed over a territory nine miles in diameter, keeping 150 to 176 colonies in each yard. He breeds his queens and drones at home, and sends them over to Islands in the Georgian Bay, and by this means keeps them unquestionably pure, impregnation being made sure. His profits arise largely from the sale of queens, but he also sells large quantities of fine honey at 20 cents per pound. The Judge spoke well of Canadian honey, and exhibited a sample which he had brought home with him. He said there was a great quantity of fine extracted honey on exhibition at the Convention. The most prominent questions discussed in the Convention were left without taking a vote. On spreading the brood, the weight of opinion was against it, many contending that it was one course of foul brood. It requires an expert to accomplish it successfully. The weight of opinion was in favor of the Langstroth hive. Mr. Langstroth is entitled to be called the Huber of America. He thought Mr. Jones the prince among bee-men. He spends vast sums of money in experimenting. According to Mr. Jones' experiment, there was no great difference in the products of the different kinds of bees, as he observed in Mr. Jones' apiary. In Convention he met distinguished bee-men. There were but three representatives from the Southern States. Mr. J. P. H. Brown, of Georgia, Mr. W. S. Hart, of Florida, and himself. He thought more honey was produced in the North than in the South, because they have more honey-producing plants. It was unanimously agreed that extracted honey was the most profitable, and the disparity between comb and extracted honey was fast disappearing. As to different varieties of bees, he formed a diversity of opinions. There was no decision of the Convention as to which were best.

A motion prevailed to appoint a delegate to the next National Convention to meet at Rochester, N. Y. Judge Andrews was selected as delegate. A motion was carried to so amend the Constitution as hereafter to collect $1 as an initiation fee. Also another motion carried, that voluntary contributions of $1 from each member be asked for, in order to defray all expenses of the Association. A resolution passed instructing the secretary to notify all the members not present, of the one-dollar contribution, and request them to send in theirs.

Association adjourned till 1 p. m.

EVENING SESSION.

The Associatiom met pursuant to adjournment, Mr. Carroll presiding.

11. Question from the committee. "Is the moth a destructive enemy to the bee in any way?" Answer. "Not to the bees. but to the comb." Judge Andrews held that the moth never hurt a colony of bees, but destroyed unprotected comb. That a strong colony is never hurt by moths, and advised that combs be hung up and smoked like bacon. Dr. Howard said he put his combs where light and air could reach them, and they were never injured by moths; but if they were put in a dark, damp, and warm places moth would destroy them. Judge Goodner had found, by experience, that it would not do to hang combs in a dark smoke-house. Mr. Kerr hung his to joists over-head, and found it a safe plan. The report of the committee was adopted.

12. "What is the best method of increasing colonies." Answer, "By artificial swarming." Sustained by the Association.

13. "What is the best plan of keeping the bees from swarming?" No answer by the committee. Mr. Carroll said swarming could be prevented to some extent by using the extractor freely. Dr. Howard said swarming could be prevented by keeping the bees too weak, but did not like the manner in which the question was put. Judge Andrews said he would be obliged to any one who would give him any information as to how to limit swarming without injuring the bees. He had been for years trying to solve the problem. No conclusion arrived at.

14. "Is the swarm always led by the queen?" Committee answered "No." Mr. Carroll thought the queen always led. Judge Andrews thought all the bees went out by instinct and one bee never leads another. Bees will come back to hunt the queen sometimes but not always. Mr. Horn remarked that he could see no practical bearing in the question; he had seen the queen come out first, in the middle, and the last. Answer of the committee sustained.

15. "Does the queen control the colony in anything?" Answer by the committee, "yes." Judge Andrews held that she did, only so far as the work of the one depends on the other. Both are moved by instinct. Dr. Howard did not think the queen "bosses" the bees or tells them what to do. Instinct prompts them all and tells them how to do. Mr. Davis did not know what was meant by instinct, as he never had heard that bees had reason. Mr. Horn thought all acted from instinct. Dr. Marshall said it was difficult to define the difference between reason and instinct. Bees pay respect to the queen only after impregnation. They feed her and give her other attentions. He said the queen controlled the colony to a certain extent. The queen is the first to become excited before swarming. The report of the committee was adopted.

16. "Is a division-board desirable, and are the advantages sufficient to justify the expense?" Answer, "No". Judge Andrews and Dr. Marshall favored the use of division-boards. Mr. Carroll said that an empty comb was sufficient. Answer of committee reversed.

Judge Andrews asked. "Should the old queen be removed before the new queen is selected?" Mr. Carroll said that, in a good honey season, the old queen should remain until the other was turned loose. Mr. Kerr had lost queens while in the cage in the hive.

Adjourned to meet on the first Thursday in May, 1885.

W. B. HOWARD, *Sec.*

For the American Bee Journal.

"Reversible Frames."

H. DAVIES.

On page 439 of the BEE JOURNAL of July 9, I read Mr. Pond's article on "Reversible Frames;" and a few minutes afterwards I began to read the *Kansas Bee-Paper* for July, when, on page 105, I saw the following article on the same subject. Imagine my surprise to find it signed "P" (which, I believe, is Mr. Pond's signature for his editorial articles in that paper). I am now puzzled to know what Mr. Pond's real ideas are on reversible frames. Here is the article:

"The question of reversible frames is one of no little importance; that is to say, the results said to be produced by reversing, are exceedingly advantageous. The experience of all bee-keepers is, that the lower part of frames are never as well filled out as the upper; reversing is said to overcome this entirely. We, however, look for far greater results therefrom. Our experience is, that when we get the brood placed to the top-bars of the frames, the bees will at once begin work in the sections. In order to accomplish this in days past, we have been obliged to make use of the extractor, which causes considerable hard labor at a time when we are busy otherwise. Now, it seems we can accomplish this result simply and easily, all we need to do, is to reverse the frames, at the time we put on the sections. The bees will rear brood close up to the top-bars, and at once proceed to fill the sections. If any trouble is feared from the queen going into the section also, it can be easily remedied by using the perforated-zinc honey-board between the frames and sections. We experimented somewhat last season in this matter, and with good results. We are again experimenting this present season on this point, and so far it has proved a success. Many plans of making reversible frames have been given to the public; but the simplest one we know of is to make frames with a projection only at one end of bottom-bar. These frames can then be used in any hive, by simply putting a strip of tin or sheet iron across the bottom of the hive for the prejection of the bottom-bar to rest on. Then, when desired, the frame can be turned over without trouble, or change of the hive. P."

I cannot make the two articles agree at all. Can Mr. Pond?

Austin, Texas.

SELECTIONS FROM OUR LETTER BOX

Large Crop of Honey.

We have had a heavy run on clover, which has just closed, and we have on hand more honey than the whole of last year's crop. All of the white honey is of the very best quality. The prospect is yet fair for some basswood and button-willow honey before the fall honey begins to come.

J. O. Shearman.

New Richmond, Mich., July 10, 1884.

Honey from Cotton.

The honey-flow from mint is over, and bees are working some on the cotton. The weather is dry and very hot—104° F. in the shade. I expect we will get a good flow from cotton, as the plant is very late blooming, and the main bloom will be during the last of July and the first of August.

B. F. Carroll.

Dresden, Tex., July 12, 1884.

Bees Gathering Honey Rapidly.

The work of the apiary, in this part of the country, is up to boiling heat. I put 18 colonies into winter quarters, and by neglect, one starved. After spring opened I lost two more. A number of bee-keepers in this neighborhood wintered their bees all right, and then lost them in the spring. I have 21 strong colonies, and I do not think that I ever saw bees gather honey as fast as they have done this spring. I use foundation, and in 9 days after being hived, the bees will be ready for boxes. I use a modification of the Langstroth hive, called the Fisk hive. I have been using the brood-frames, but I am now introducing a crate into the hives, and I think it is going to be an improvement. I have a splendid location for an apiary. It is two miles from timber and running water, and is bounded by pastures over-flowing with white clover bloom, which, through the bees, lavish their copious streams of wealth upon my scanty store.

Wm. Staley.

Adair, Ill., July 3, 1884.

No Honey, and Prospects Blighted.

I am sorry that I am compelled to say that we have got no honey, as yet, from our bees in this city. It seems that our prospects are blighted in regard to the rich harvest which, to all appearances in the spring, we were promised; but this season we have been over-run with caterpillars and moths of all kinds; in fact, there is not a blossom that is not alive with insects of some kind, and in some places the caterpillars have eaten every green thing. The first crop of lucern has been cut without coming into bloom; so the bees are just getting as much honey as will feed them and their young. I went through my apiary, July 5, but I could find only 2 frames that I could extract from, and those were not sealed over. I think that if a change does not take place soon, the bees will have to be fed their winter supplies. I have fed to my bees about 400 pounds of honey this spring and summer, but I could not get 40 pounds back. I have now 25 colonies, and they are all in good condition. No blame can be attached to the condition of the bees. T. W. Lee told me, the other day, that he had fed over 500 pounds of honey to his bees, and did extract 5 pounds during May; but it was only to keep the "baby from crying," as he had fed so much that he was left without any honey for his own family. I had about 60 pounds with which I have been able to keep peace in the house, so far; but I rather fear that there will be a cry soon, if a new supply is not forthcoming. In 1882, our honey months were July and August; in 1883, June and July; and, perhaps, to make a change, it may be August and September for 1884. I will be pleased to notify you of such a change.

John Dunn.

Tooele City, July 8, 1884.

Honey Crop.

The swarming season is about over, and the bees have done but little so far. I have had only 25 swarms from 135 colonies, and have only about 1,200 pounds of finished comb honey ready to come off. Bees are in fine condition, and we have a fair prospect for a fall crop.

J. V. Caldwell.

Cambridge, Ill., July 16, 1884.

One-Fourth of a Crop.

Clover harvest is over here, and the bees are robbing. The season has been peculiar; plenty of bloom, but cold nights and wet days, so we have not more than one-fourth of a crop.

B. H. Standish, 156.

Evansville, Wis., July 15, 1884.

On a Still "Hunt."

I desire to state, since the matter has come up, that a Mr. F. H. Hunt, of Iowa (Linn county I think) has been selling stuff unfit to eat as honey, in Iowa, and tried the same in Nebraska last winter. A caution over my signature was promptly published, and that was the last I heard of him. The matter is in the hands of a chemist. For particulars I would refer to letters from Mr. O. O. Poppleton and a Mr. McElroy, of Iowa, now in possession of Mr. M. L. Trester, Secretary of the Nebraska State Bee-Keepers' Association.

T. L. Von Dorn,
Pres. Neb. S. B. K. Ass'n.

Omaha, Neb., July 11, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

How to Make Honey-Boards.

1. Will Mr. Heddon tell me in which number of the Bee Journal he gave a description of his honey-board (sink honey-board), and how to make it? I have mislaid it, and I am unable to "come up with it."

2. If you were working, or intended to work for extracted honey, would you use frames for the upper story the same depth as the brood frames, or shallow frames half that depth?

3. When preparing bees for wintering on the summer stands, do you leave the slat honey-board on, or remove it and cover the frames with a quilt?

E. E. Ewing.

Highlands, N. C.

Answer.—1. I have never given any description of how to make my honey-board, because it would take up a great deal of space, and then one might not get it correct without a sample to work from. I can do so in the near future, however.

2. After carefully weighing, in my own mind, the advantages of both systems, I have made up my mind that I would use the whole story above. I would make the super the same width as the hive, ½ inch shallower, use sink honey-board between it and the hive, and use the same number and style of frames as in the hive. I have fixed one whole apiary of 200 colonies that way, and have made 500 supers (or 2½ per colony, spring count). By the use of two supers to the colony, you can leave the honey to be well ripened before extracting, and yet never lose any honey by so doing, even during the most excessive honey-flow.

3. I sometimes turn over the honey-board (thus doubling the bee-space above the frames), and lay a cloth over it, and put the packing over the cloth. For ten years I have used a basswood stick thus bent and held bowing, by its ends being within the sides of the hive. The hives are 11½ inches in the clear, and the stick is 3-16x⅞x12 inches long. I soak them and press them into hives to dry. They should be cut straight grained. I am not sure that these bows are any better than the inverted honey-boards. I cannot say that I know either device is of much value. I do not think as much of it as I once did. I am revolutionizing my whole wintering methods.

Honey Gathering Qualities, etc.

It will soon be time for bee-men to begin to brag on big yields, increase, etc. I am satisfied with present success, though convinced that, with experience and suitable aparatuses to manage 30 to 50 colonies, I can do better. I have 30 colonies of bees, and only 2 are working industriously. One is 3 years old, and cast one swarm about June 15; the other is a second swarm from a 3-year-old colony. Now, if these 2 colonies can find honey to gather, why do the other 28 colonies take it so easy? They work some, and all except this second swarm have sections over the brood-chamber, and plenty in which to store all they could gather, though ever so energetic. I remove all of the sections as soon as capped, and new ones, with starters of natural combs, put on; and if there should be a few uncapped sections at the outside of the honey-rack (I use the Langstroth hive), I return them in the new rack to be filled and finished. I never tier them up, but remove and re-crate them for surplus, using two-pound nailed sections. Some of my colonies, of apparent equal strength, will store double the surplus honey of one setting close by its side. I do not understand why. Reasoning from cause to effect, there is a why, and bee-men whom we (beginners) look to as "the wise men of the East," ought to give us a satisfactory explanation. Mrs. Harrison says: "No good bee-keeper of the present day allows his bees to hang out and not work." I have seen a good many such cases this summer, and generally in box hives, though not always. What is to be done to such or with such bees to get them to work? They will not swarm nor work in boxes, but some store honey outside of the hive under the bottom-board, or against some building near which the hive is. Would you consider 50 pounds per colony, spring count, a reasonably good average? For profit, would you run bees for comb or extracted honey, or both? If both, when do you begin to extract? Would you extract surplus or section honey, or both? If extracting were done after basswood, and the bees did not fill up the combs again, what would you winter them on?

T. F. KINSEL.

Shiloh, O., July 14, 1884.

ANSWER.—Your questions are all pertinent to success in our business; and I will answer them in the best way I can. The great difference in the working of these two colonies, compared with the rest, proves too much to be accounted for by traits of the bees. It seems likely that they have found, by accident, some reservoir of nectar or honey, that the other colonies have not found. We know there is an appreciable difference in the honey-storing powers in different strains and colonies of bees—one great enough that one colony of apparently the same strength, condition, and opportunities, will store twice as much surplus as another; and this difference is based upon mental and physical characteristics which it is worth while to breed from. But when we see such a radical difference as nothing on the one hand, and lively storing on the other, we can hardly account for it entirely upon characteristics. When Mrs. Harrison says, "No good bee-keeper of the present day allows his bees to hang out and not work," she undoubtedly means when there is work to be done. No matter how good the bee-keeper or his bees are, when there comes a sudden cessation of honey flow, strong colonies will lay outside the hive in festoons, when the weather is excessively warm. This is, no doubt, best.

They will, however, build no comb outside the hives. When bees do this outside work, you may rest assured that they have not sufficient inside room in proper communication with the brood department. Whether 50 pounds per colony, spring count, is a reasonably good average or not, depends upon whether it is comb or extracted honey, how much capital and labor is expended, how good the season, etc. Whether it is satisfactory to the producer or not, only each individual producer is the proper one to judge. Whether I would run colonies of bees for comb or extracted honey, would depend entirely whether my apiary was at home or abroad; whether situated in a climate especially adapted to comb building or not; whether I wished to keep strictly pure Italian bees or not; or whether my market was general or local. In Northern Michigan, especially in an apiary away from home (an out apiary), I would produce extracted honey. In any locality where the honey is mostly dark, I would produce extracted honey. In a location where I was forced to ship my production great distances, I should for that reason favor the production of extracted honey. I should never produce but one kind in one apiary, unless the local trade consumed my crop, then I would not if I had more than one apiary. I should begin to extract as soon as the stored honey is thoroughly ripened—say when it is from ½ to ⅔ capped over; much depending on the condition of the atmosphere and stage of development of the blossoms from which it is gathered. I should never extract from sections, but from full-sized Langstroth frame, from a super above the same size of the brood-chamber, always using the two-story system. In a small apiary where you have plenty of time, and are running for comb honey entirely, you can often advantageously extract some honey from the side brood-combs, near the close of an excessive flow, with which to supply a small local trade. I am always glad to have my bees come out in the fall without sufficient stores to winter on; but not if caused by a dearth, but by such management as has placed the honey in the surplus receptacles, and upon the market; which condition of things allows me to feed sugar syrup without first having to go through the trying ordeal of extracting their honey after all gathering is past, when bees are inclined to rob and be cross.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL, }
Monday, 10 a. m., July 21, 1884. }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—The honey harvest is now virtually over, in this part of the country, and the yield is below the average of former years. The average, per colony, in Ohio and Indiana is, perhaps, 30 to 40 lbs.; in Kentucky it may come up to 100@110 lbs. per colony. I can only speak from observations obtained so far, and my figures may not be entirely reliable. Sugar being cheaper than it has been, perhaps, for the last 20 years, we cannot expect honey to be high; but there was a short crop, and it would be my advice to bee-keepers not to be in too much of a hurry to dispose of their product. The demand for extracted honey is fair, and to all appearances, gradually improving. It brings 6@9c per pound on arrival. There is a small demand for comb honey, but we had small offers only, and a good deal could be sold. It brings 14c per pound on arrival.

BEESWAX—Offerings plentiful at 30@32c on arrival. C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—Present sales of comb honey are slow and will be until the new crop arrives. We quote: Fancy white 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market. Extracted, white, 8@9c.; dark and buckwheat, 7@8c.

BEESWAX—Prime yellow, 34@35c.

McCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—This week we have had liberal receipts of comb honey, and the prices are irregular. As a rule, the honey is of first quality, and put up in good shape; a gradual improvement is noted in this respect. Prices range from 14@16c for the best; occasionally a case sells for more than that, but it is in a retail way. The extracted honey is still sluggish, at nominal prices—6@8c per pound.

BEESWAX—Fair receipts; prices, 30@37c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—The market is quiet and weak. There is considerable white extracted on market, thin and watery, and showing a tendency to candy. Such stock cannot be placed much over our inside quotation. Sales of thin and water white have been made at 5½c. In a retail way choice extracted of heavy body is offering at 6½c. White to extra white comb, 14@17c. Dark to good, 10@13c. Extracted, choice to extra white, 5@6½c. Dark and candied, 4c.

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—No change to note in prices. As predicted in last report, the temporary activity was only accidental, and last week has been dull. Some little new honey is now arriving, but it fails as yet to tempt buyers to any extent. I look, however, for a very large demand a little later, and would suggest shipment by Aug. 1, of all that is ready in quantities to justify. I have still a few more "Suggestions on Packing and Shipping Honey," to mail free on application. I will also furnish shipping stencils free to any one desiring to ship to me.

BEESWAX—Nominal, at 30@35c.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections 17@18c; extracted, 7½c.

GEO. W. MEADE & CO., 213 Market St.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

☞ In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ We now club the *British Bee Journal* and our Monthly for $2.50, or it and the Weekly for $3.50.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

GETTING UP CLUBS.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the Bee Journal will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "Our Book List" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the American "Popular" Dictionary, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the Bee Journal as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly Bee Journal and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

☞ Do not let your numbers of the Bee Journal for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey," (only 50 cents per 100) or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy 5 cts,; per doz., 40 cts; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Bingham Corner.

Marengo, Ill., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. Bingham, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. Miller.

Woodard's Landing, Wash. Ter.

The Best Smoker.—To Bingham & Hetherington, Abronia, Mich., Dear Sirs: —Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. Hastings.

Dresden, Tex., May 28, 1884.

Conquer the "Cyps."—T. F. Bingham, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. Carroll.

Borodino, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. Doolittle.

Prices, by mail, post-paid.

Doctor smoker (wide shield)..	3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)....	2½ " ..	1 50
Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker........	2 " ..	1 00
Little Wonder smoker..........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch..............................		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

Local Convention Directory.

1884. *Time and place of Meeting.*

Aug. 6—Lorain Co., O., at Elyria, O.
O. J. Terrell, Sec., North Ridgeville, O.

Aug. 2.—Gibson Co., Tenn., at Trenton, Tenn.
T. J. Happell, Sec.

Aug. 13.—Northeastern Ky., at Covington, Ky.
G. W. Cree, Sec.

Aug. 19.—N.W. Ill. & S.W. Wis. at L. Highbarger's.
J. Stewart, Sec., Rock City, Ill,

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of futura meetings.—Ed.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you. within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

For Rent. **My Apiary** of 100 colonies of Bees, including a house and one acre of land, shop, honey-house, etc. Also, Bees and Honey for Sale. For terms, address

B. S. BECKTELL, Three Oaks, Mich.

Syrian-Albino Queens!

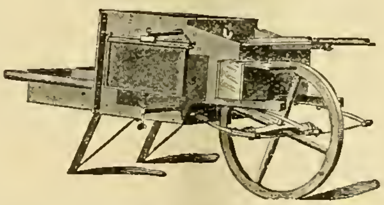
My new Strain **AHEAD** of all. They build beautiful, straight Combs, **without Separators,** and are **UNEXCELLED** as workers. Reared by Alley's method.

Select-Tested, to breed from	$3.00
Untested	$1.00

Address, **DR. G. L. TINKER,**
30Atf New Philadelphia, Ohio.

TESTED QUEENS, $2; untested, $1; 4-frame Nuclei, $3.50 and $4.50. Mississippi Wax Extractor, $3. OSCAR F. BLEDSOE, Grenada, Miss.
21C12t

SYSTEMATIC AND CONVENIENT.



DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Price, complete, only.............$18.00.

For Sale by

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

QUEENS!

BY RETURN MAIL,

FROM OUR NEW STRAINS OF

ITALIAN AND ALBINO BEES.

We are happy to announce to the bee-keeping public that we are now prepared to send you QUEENS on short notice, at the following low rates:

Untested, each	$ 1.00
" per ½ dozen	5.50
" per dozen...........	10.00
Warranted, each...........	1.10
" per ½ dozen	6.00
" per dozen............. ...	11.00
Tested, each	2.00
Select Tested, each......................	2.50

Send for our descriptive Price-List and see what our customers say of our goods.

Address, **WM. W. CARY & SON,**
COLERAIN, MASS.

(The oldest breeders of Italian Bees in America.)
28Atf

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax the price of comb foundation is now **advanced 5 cents per pound** above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

BEESWAX.

I pay **30c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

DR. FOOTE'S

HAND BOOK OF HEALTH,

Hints and Ready Recipes,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

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What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause &
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Mich.,

can furnish pure Italian Queens, reared under the swarming impulse, in his own apiary, at $1.00 each. Make money orders payable at Flint, Mich. 29Atf

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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The British Bee Journal is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly American Bee Journal and the *British Bee Journal*, both for $3.50 a year.

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1ABly Lock box 995. Belleville, St. Clair Co., Ills.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

WhitePoplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
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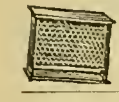
FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4Aly

LOCAL REPORTERS WANTED.

We want a local reporter in every farming community to furnish us from time to time such facts as we may require. Send 25 cents for credentials and full particulars regarding services and compensation. Address Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A18t

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

FDN. MILLS. 10 INCH $15.00
W. C. PELHAM,
MAYSVILLE, KY.
37Aly

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK Co., Portland, Me. 4Aly

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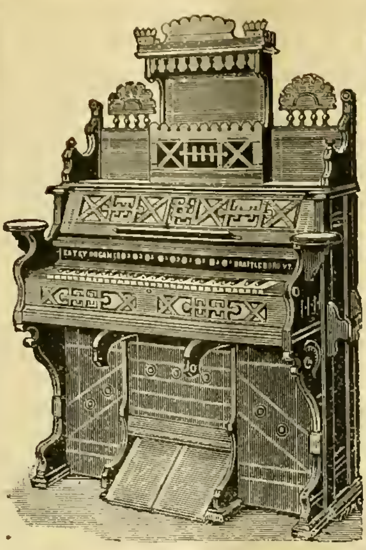
ITALIAN QUEENS, DADANT FOUNdation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

ITALIAN QUEENS

AND BEES.

Dollar Queens, 90c.; six, $5.00; twelve, $9.00. Warranted, $1.50; tested, $2.50; selected, 25 cents extra. Warranted pure. Order now and get choice Queens. Send money by P. O. Order, Registered Letter, or American Express.

27Atf **N. F. ASHTON, Davenport, Iowa.**



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The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,
188 and 190 State St., CHICAGO.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

NEW AND USEFUL

Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Eureka Wiring Tool,

For pressing Foundation into wired frames. Something entirely new.

Price, 50c. by mail.; 40c. by express.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.
923 West Madison Street. CHICAGO, ILL.

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
GEO. B. PETERS, M. D.

We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.--No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,
Lock box 995, Belleville, St. Clair Co., Ills.
18A13t 6B3t

IF YOU WANT

—A—

VEHICLE,

SEND A POSTAL CARD TO THE

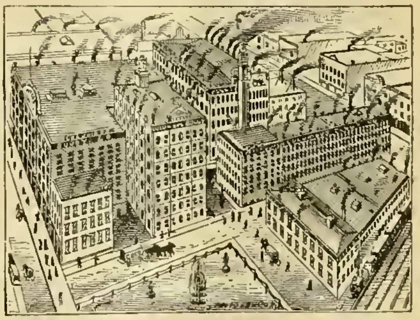
COLUMBUS BUGGY CO.

COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY Co., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

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Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

1868. 1884.

HEDDON'S
COLUMN.

BEST GIVEN
COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..	$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey..........	$3.00
The above Hive complete for both in one..........	4.50
One Hive in the flat..........	2.00
Five or over, each..........	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from..........	$ 3 00
Untested..........	1 25
Untested, after July 1st..........	1 00
Untested, (per doz.) after July 1st..........	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition
OF
BEES and HONEY,
OR THE
Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.

H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

BEE-KEEPERS, before ordering your **APIARIAN SUPPLIES,** Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

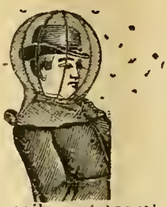
Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

ALFRED H. NEWMAN,
923 West Madison Street,
CHICAGO, - ILLINOIS.

A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4Aly

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J. W. ECKMAN,
DEALER IN
Pure Italian Bees and Queens

Fo further information, send for Circular.
7Aly RICHMOND, Fort Bend Co. TEXAS.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid ....in May and June, each....$	.50
Italian—untested—not warranted, in May and June, each..........	1.00
Italian—warranted, May and June, each.....	1.50
Italian—tested Queen..........	2.50
Full colonies of Hybrids..........	7.00
Full colonies of Italians..........	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

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65 *ENGRAVINGS.*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

STANLEY'S
Automatic Honey Extractor
AND SMOKER.

Send for descriptive Circular and Prices to
G. W. STANLEY & BRO.,
20Atf WYOMING, N. Y.

COMB FOUNDATION MILLS.

The "Best" and "Cheapest" in the market. Send for Sample and Price List free.
PAUL SPOERKE, Fond du Lac, Wis.
14Dtf

GIVEN FOUNDATION.—As I have purchased a Given press, I will make Foundation on the same, this season. Will take Beeswax in exchange for Foundation or work it up for two-fifths. 23D4t A. WORTMAN, Seafield, White Co., Ind.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., July 30, 1884.

VOL. XX.—No. 31.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **$1**.

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☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

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To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

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For either the Weekly or Monthly Editions.

A line of this type will contain *about* **7** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, space, for each insertion

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

Topics Presented in this Number.

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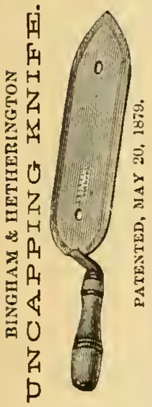

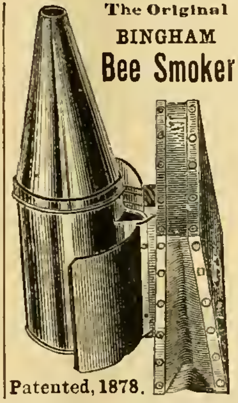

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., JULY 30, 1884. No. 31.

THE AMERICAN
BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

"Honor to Whom Honor is Due."

We have received the following from W. Z. Hutchinson, being upon the above subject:

After Mr. Heddon has battled as he has for the "pollen theory," borne up bravely under the slurs and sarcasm which has been hurled at him, met all arguments that have been brought forward, and, best of all, after having conducted extensive experiments to *prove* the theory; and now, just as success appears to be poised upon her bright wings above his head, for Mr. Fradenburg to step forward with claims of priority, appears to me to be unjust, and I cannot resist the temptation of commenting on the subject.

When Mr. John Longmate, last March, coolly gave in the BEE JOURNAL an illustrated article embracing principles already illustrated and described by Messrs. Heddon and Alley, and never mentioned their names, I said to myself, "there is cheek;" but this claim of Mr. Fradenburg, of being "head-and-neck ahead" of Mr. Heddon regarding the "pollen theory," caps the climax. Has Mr. F. so soon forgotten that Mr. Heddon reported, about a year and a half ago, how he (Heddon) produced diarrhœa at will, by feeding stores well mixed with flour for pollen? Mr. Heddon has made and reported at least three as conclusive experiments as the one reported by Mr. F. on page 374; and why Mr. F. should consider his the *first* experiment is beyond my comprehension, unless it is the first one that he believed to be *proof*.

It is, perhaps, natural that each should look upon his own experiments as the most conclusive. Many regarded Mr. Heddon's experiments as proof—some did not. Mr. Pond did not, and he views Mr. F.'s experimets in the same light. Mr. F.'s experiment resulted in exactly what Messrs. A. B. Mason, Kohnke, Oatman, Heddon, myself, and many others would willingly have staked our reputation upon, that it would; but because Mr. Pond put him (Fradenburg) in mind of it, it is simply preposterous that he should claim the honor of priority. Dr. Tinker would not allow that.

I do not wish to be misunderstood. Others may have *thought* of the "pollen theory" before Mr. Heddon did, but what have they *done?*

The "pollen theory." Theory to whom? Theory to those who have no proof but somebody's word. *Knowledge* to whom? To those who have tested it over and over again, year after year. To the mass of bee-keepers it is yet a theory, and will so remain until the common voice says, "scientific fact."

Rogersville, Mich.

In reference to Mr. Longmate's illustrated article, we must in justice state that both the illustration and article were in our drawer awaiting room for an insertion in the BEE JOURNAL for several months before they appeared.

Mr. Fradenburg's assertion that he was the discoverer of the pollen theory is, of course, not proven—merely asserted. Upon looking for the proof, we find on page 374, that he only claims to have started his experiments "last fall," while Mr. Heddon had then been writing upon that theory for *two years*.

Inasmuch as we have placed Mr. Fradenburg upon record, by publishing his claim to be the author of "the pollen theory," we now kindly call upon him for the proof, which, of course, he must have (or thinks that he has) or he would never have *dared* to make his bold assertion. Until he has sufficient time to present his reasons for putting forth the claim, let all suspend judgment.

We cannot refrain here from giving a caution to all writers for the BEE JOURNAL, to be sure to make no assertions which they cannot substantiate, in the most satisfactory manner—no matter what may be the subject under consideration. To do otherwise often engenders strife and confusion, as well as leading to ill-feeling and contempt.

Local Convention Directory.

1884. *Time and place of Meeting.*

Aug. 6.—Lorain Co., O., at Elyria, O.
O. J. Terrell, Sec., North Ridgeville, O.

Aug. 2.—Gibson Co., Tenn., at Trenton, Tenn.
T. J. Happell, Sec.

Aug. 13.—Northeastern Ky., at Covington, Ky.
G. W. Cree, Sec.

Aug. 19.—N.W. Ill. & S.W. Wis. at L. Highbarger's.
J. Stewart, Sec., Rock City, Ill,

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

◆

☞ We have received a copy of a pamphlet entitled "The Poulterers' Guide, for treating diseases of poultry, giving cause, symptoms, and remedies for their cure; also, how to caponize fowls, and feed and rear chickens hatched in an incubator." It is a handsome book, and well worth the price (25 cents), for it is full of information valuable to every breeder of poultry. It is written by Mr. C. J. Ward, the editor of the *Poultry Journal*, of Chicago. We can supply it at the publisher's price.

◆

☞ A Bee-Keepers' Association has been formed for Hamilton County, Texas; Constitution and By-Laws have been adopted, and officers elected. Mr. W. M. Sparkman is president, Mr. C. S. Doubleday is secretary.

◆

☞ We have received the Premium List of the Tri-State Fair, which will be held at Toledo, O., Sept. 8 to 13, 1884. Dr. A. B. Mason, of Wagon Works, O., is the superintendent of the Apiary Department. The premiums are substantially the same as last year, and amount to $219. The Doctor will send a copy of the Premium List to any one who desires to have it.

Honey Dew.

In a recent issue of *Gleanings in Bee-Culture*, a correspondent has an article on Honey Dew, and asks Prof. Cook for an explanation, as follows:

"I noticed an article in *Gleanings* for June 15, from E. R. Root, about honey-dew. I had a little experience in that line this season, which may be of interest to your readers. About the 8th or 9th of this month, I went to the pasture after the cows, when, near the woods, I heard a tremendous roaring of bees, and, thinking a swarm was passing over, I looked in every direction, but could see no bees. As I got nearer the woods, the sound seemed to increase in volume. Just in the edge of the woods, I saw a young hickory tree in blossom, and thinking the bees might be working on that, I went up to the tree, when I found the leaves completely covered with what is known as honey-dew. The trees were fairly alive with bumble-bees, honey-bees, yellow-jackets, wasps, hornets, and flies; the leaves were so covered with the honey-dew, that they had the appearance of being varnished.

"Looking up to the top of the tree, I saw myriads of small insects, which I took to be aphides or plant-lice; but on looking closer, I discovered that they were small, striped bugs, which seemed to be gathering honey-dew, with the rest. After looking around and finding the honey-dew on oak, maple, elm and beech trees, I went on over to friend Phelps', taking some of the leaves with me. I found him at home, and together we went back to the woods, to see if we could discover the source of the honey-dew. After looking at the trees for some time, we about came to the conclusion that it was a natural secretion of honey in the leaves of the trees. While we were talking and watching the bees, we noticed a bee running along the branches, stopping from time to time to gather something. Upon pulling down the lims and looking closely, we discovered that they were literally covered with the scaly aphis, or bark-louse. Upon close inspection, we discovered a small drop of clear fluid exuding from the backs of the lice. This was what the bees were gathering on the branches, and it was falling all the while in a fine spray, it being visible on our coats when we came out into the sunshine. Now, this scaly aphis assumes the color of the bark of whatever kind of tree they are working on, and being quite small it requires close inspection to see them. I think we would not have seen them but for the bees working on the branches. Now, may not this, in a measure, account for some of those mysterious falls of honey-dew that we hear of? The flow of honey from this source lasted about two or three weeks, or until the bees began to work on white clover, and perhaps a little longer, as I find, in taking off honey, the boxes are spotted more or less with the honey-dew, while some are filled entirely with it. As to quality, all that I have to say is, that if any person can eat it, he is capable of eating anything. It looks nasty, it tastes nasty, and it is nasty; and what to do with it, I do not know, for it is not fit for a hog to eat.

"Now, as I am rather ignorant of the subject of entomology, will Prof. Cook, or some one else who is posted, inform us of the different stages of the bark-louse, and about the time that they remain in each stage, and whether they often produce this so-called honey-dew? This is a new thing to me, having never in my life noticed it before, and I would like to know how many different kinds of insects and worms are capable of producing honey-dew."

Prof. Cook has prepared an article on this subject, as follows:

From very numerous inquiries as to name, habit and remedies regarding this louse, I have for some weeks intended writing you; but an overwhelming amount of work has prevented, until your letter drives me to it. Pres. E. Orton writes me that this insect is killing the soft maples, and wishes a remedy. Mr. O. J. Terrell, from North Ridgeville, says they are affording much nectar which attracts the bees and seems excellent, and wishes to know if it is probably wholesome. The editor of the Coldwater *Republican* asks if there is any way to save the maples. These are samples of a score of inquiries coming thick from Ohio, Illinois, Indiana and Michigan.

DESCRIPTION.

The maple tree scale or bark-louse (*Pulvinaria innumerabilis*, Rath.) consists, at this season, of a brown scale about five-eighths of an inch long, which is oblong, and slightly notched behind. On the back of the scale are transverse depressions, marking segments. The blunt posterior of the insect is raised by a large, dense mass of fibrous, cotton-like material, in which will be found about 800 small, white eggs. These eggs falling on to a dark surface, look to the unaided eye like flour; but with a lens they are found to be oblong, and would be pronounced by all as eggs, at once. This cotton-like egg-receptacle is often so thick as to raise the brown scale nearly a fourth of an inch. These scales are found on the under side of the limbs of the trees, and are often so thick as to overlap each other. Often there are hundreds on a single main branch of the tree. I find them on basswood, soft and hard maple, and grape-vines, though much the more abundant on the maples.

Another feature at this mature stage of the insect, is the secretion of a large amount of nectar. This falls on the leaves below, so as to fairly gum them over, as though they were varnished. The nectar is much prized by the bees, which swarm upon the leaves. If such nectar is pleasant to the taste, as Mr. Terrell avers, I should have no fear of the bees collecting it.

From the middle to the last of June, the eggs begin to hatch, though hatching is not completed for some weeks after it begins, so we may expect young lice to hatch out from late in June till August.

The young lice are yellow, half as broad as long, tapering slightly toward the posterior. The seven abdominal segments appear very distinctly. The legs and antenna are seen from the other side. As in the young of all such bark-lice, the beak, sucking-tube, is long and thread-like, and is bent under the body till the young louse is ready to settle down to earnest work as a sapper. Two hair-like appendages, or setæ, terminate the body, which soon disappear.

The young, newly-born louse, wanders two or three days, then inserts its beak into the leaves where it first locates. It prefers the middle underside of the leaf. In autumn, the much-enlarged louse withdraws from the leaves and attaches to the under side of the twigs and branches; while on the leaves, they sometimes, though rarely, withdraw their beak, and change their position. In winter, the young lice remain dormant; but with the warmth of spring, as the sap begins to circulate, the lice begin to suck and grow. The increase of size, as the eggs begin to develop, is very rapid. Now the drops of nectar begin to fall, so that leaves and sidewalks underneath, become sweet and sticky. In the last Ohio *Farmer*, Mr. Singleton states that leaves of the maple do secrete honey-dew. It is on the leaves, and there are no aphides or plant-lice. Mr. Singleton's honey-dew is, without doubt, this same nectar from bark-lice. Had Mr. S. looked on the under-side of the branches, instead of on the leaves, he would have found, not aphides, to be sure, but bark-lice.

If these spring lice are examined closely with a low magnifying power, a marginal row of hairs will be seen.

MALES.

Some few of the scales, in late July, will be noticed to be dimmer, lighter in color, and somewhat more convex, above. In these, the setæ do not disappear, but may be seen projecting from the posterior end of the scale. In August, the mature males appear. These have the scales, have two wings, and are very active. Although the females are to continue to grow till the next June, coition now takes place. The males are seen for two or three weeks, though each individual probably does not live as many days. It is quite probable that, as in case of production of drone-bees or aphides, the males of these scale-lice are not absolutely necessary to reproduction. We know they are not in some species.

REMEDIES.

By use of a long-handled broom, dipped in strong lye or soap-suds, the thickly gathered lice could be readily removed, on the lower side of the branches, at any time in the spring. This would kill the lice, and prevent egg-laying, or destroy the eggs already laid. The earlier this is done in the spring, the better. The position of the lice, on the under-side of the branches, makes this more practicable, if not the only practicable remedy at this season. On a few trees, or on small trees, this is no serious task. If this is neglected, or is thought to be too great a task, the trees may be syringed in early July, just when the young lice are most susceptible, with the following : One quart soft soap, ten quarts water, and one quart kerosene oil ; stir all together. This can be thrown on with a fountain pump. As the lice are mostly on the lower side of the leaves, it should be thrown from below, upward. This also applies to other species of bark-lice, which are very common this season. The basswood, the tulip (see my Manual , p. 249), the elm, the hickory, the blue-ash, etc., are all suffering from bark-lice, much like the above, except that the cottony substance is wanting. It is a comforting truth, that all these species are often destroyed by their enemies before they entirely kill our trees, though they often do great harm.

Bee-Keeping in Cuba.

Mr. A. J. King has written the following very interesting letter to his paper, the *Bee-Keepers' Magazine :*

The average Cuban bee-hive consists of a box 10 to 12 inches square, and 5 feet long, nearly always open at both ends ; often instead of boxes, hollow palm logs about the same capacity and length are employed. These hives always occupy a horizontal position, sometimes on the ground, but oftener on a rude frame-work about 3 feet high, driving down crotched stakes about 4 feet apart, and as long as is deemed necessary to accommodate the number of hives owned by the bee-keeper.

Long poles, usually of bamboo, are stretched from crotch to crotch, the whole length of the apiary ; these poles supporting the ends of the hives.

The bees usually build their combs continuously from one end to the other of these hives, and often project them some distance beyond the ends of the hive, making combs 6 and 7 feet long, and only from 10 to 4 inches wide. We transferred some of the log hives, in Puerto Principe in the dense forest, which were placed on the ground, and the bees had extended their combs several feet beyond the ends of the hive into the thicket. They were connected with fine brush and vines, and so firmly attached that after smoking the bees back into the hive, we had to sever all these attachments with a sword, when we cut off the combs even with the end of the hive, and placed them in a basket, which made a feast for a dozen men who had come on horseback six miles to witness the operation. This honey was pure Campanea, freshly made, and was the most delicious we have ever tasted. We transferred quite a number of these hives into movable frames in different parts of the Island, and it was amusing to witness the different expressions depicted on the faces of our Cuban friends, at seeing the bees handled as though they were harmless flies. Extreme doubt mingled with fear, deepened into astonishment, ending in surprise, admiration and joy.

On one occasion, after handling some Italians in a manner greatly exceeding their expectations, they declared that their "creoles" (native bees) could not be thus handled with impunity. So we selected a fine, populous colony, occupying one of the long board hives described above. We carried the hive under the shade of an orange tree, about 20 feet from the apiary, laid two small sticks on the ground, and stood the hive on end on these sticks. We then took an empty hive of the same dimensions and placed on top of this,one containing the bees, the top of the empty hive extended over 10 feet high,and was held in place by the branches of the orange tree. The combs in the lower hive extending from end to end, it was a matter of only a few minutes to drum and smoke all the bees from the full into the empty hive, then putting a movable-frame hive on the old stand, and spreading a cloth in front, we dumped all those bees in a heap in front of the hive ; and soon all entered and clustered on some sheets of wired foundation previously placed in the hive. We then removed the combs from the drummed hive, placed the brood in frames and gave them to their original owners in the new hive, and in a couple of days removed it to the Casanova apiary—one and a half miles distant, where it has since multiplied to 5 colonies.

From what we have said it might be inferred that the Cubans are far behind our own countrymen in the management of bees ; but leaving out of the question our progressive bee-keepers, and confining ourselves to those who still use the log gums and box hives with stationary combs, and tried by this rule, the Cubans are far in advance. They have less superstition, and manifest more intelligence in their work ; they never kill their bees to get their stores, but smoke them from one end of their long hives clear into the centre, then cut out the combs until the brood is reached, then from the other end, perform the same operation, thus saving the brood and securing the honey instead of killing the " goose that laid the golden egg."

The honey press is made as follows : A solid log, about 2 feet in diameter, and 12 feet long, is hollowed out for about 8 feet from one end into a complete trough or shell, holding often 2 or 3 barrels. The remaining 4 feet is cut down squarely for about 6 inches, forming a cavity holding about two bushels of comb honey. A wooden follower closely fitting into this cavity is placed on top of the combs, and a long lever fastened into the end of the trough, is brought down onto the follower, and the honey is all pressed out and runs into the trough, leaving the wax in the cavity, from whence it is collected for market.

In the region about Puerto Principe large numbers of these old honey camps are to be seen, where, previous to the war, from one to three thousand hives were worked in single apiaries, and where those marvelous quantities of honey and wax came from.

The native bees in Cuba are the common black, imported from Spain more than a century ago. They work vigorously all the time, and under favorable circumstances, produce marvelously, forming a standing contradiction to that old lying whim, that bees will work in warm climates, only enough to supply their own demands.

There is another bee, indigenous to Cuba, which produces a very nice honey, but whose habits are entirely different from any bee our readers have ever seen. Of these we propose to speak hereafter.

Bees & Honey at the London Health Exhibition.

A correspondent in the London *Horticultural Journal* remarks as follows on the Bee and Honey Exhibits, Honey Biscuits, the use of the Magic Lantern as an aid to apicultural lectures, etc. :

A few words will here be in season respecting the exhibits in connection with bees and bee-keeping at the Health Exhibition. All those interested in honey and bees should not neglect to pay a visit to this department. The second turning to the right after entering the Exhibition at the main entrances in Exhibition Road brought us into the midst of a very good collection of appliances and products in the shape of honey, wax, etc. The first thing to attract attention is a capital model of a swarm of bees. It is so good that at a little distance it is like a real cluster suspended from a branch. There is a fair display of honey, both in the comb and in bottles. The extracted honey is nicely put up, and we must hope that the public will learn to appreciate pure English honey, and to cease to countenance the importation of adulterated foreign stuff.

Messrs. Huntley & Palmer, the famous Reading firm, have lately brought out some exceedingly nice biscuits, called " Honey Drops." Visitors must not fail to taste them, and they will certainly appreciate this new biscuit. Immense quantities of honey are now purchased by this firm for the manufacture of this pleasant food, and this will help to provide a market for English produce. Honey is largely employed in other manufactures, and we should have liked to have seen more exhibits showing the utility of honey in foods and medicines, and so show it is conducive to health. Among the many interesting exhibits is one which, although in its present state most instructive, might be much enlarged and improved.

We refer to Mr. Abbott's case of various natural objects explanatory of the science of bee-keeping. The various queens, workers, and drones are preserved and thrown together with the varieties of comb, queen-cells, etc. The depredators of the hive are shown in the shape of the wax moth and its grubs, and the damage done by these loathsome maggots is shown by a piece of comb tunnelled by the moth grubs and covered with their spider-like web. Much of the natural economy of the bee-hive can be gathered by a careful inspection of this case. With this class of instructive exhibits must be connected the magic lantern slides shown by Mr. A. Watkins, of Wilcroft, Hereford. These are most instructive, and some of them as amusing as they are interesting. The queen, worker, and drone are capital photographic slides, and vivid recollections of various cottage apiaries come to the mind when looking at the amusing picture of "All Dead but One." By the use of such slides, a lecture on bee-keeping is made doubly interesting, and such illustrations enlarged on the sheet are highly appreciated.

We have ourselves, when lecturing on bee-keeping, used such slides. copied from the appearances under the microscope. but these photographic slides are a great improvement on pen-and-ink sketches. We must not neglect to give the due meed of praise to those who, at much expenditure of time and trouble, have placed such good collections of bee-furniture on the stages. Messrs. Neighbour, Abbott, Overton, Baldwin, and others have such good exhibits, that the various schools of bee-keepers must find sufficient to appease any amount of longing for what is good and substantial. Smokers, feeders, extractors, hives, supers, and a host of other necessaries and luxuries are all there represented.

How the "Queen" was Captured.

We allude to the Queen of England, and not the queen bee. The following from the New York *Sun* is sent to us by a correspondent, who desires to have it in the BEE JOURNAL. As it gives some facts about the way in which American honey was introduced into England, it will, no doubt, be read with interest. Some of the items mentioned, we know are true; but some of the assertions we have not so much confidence in. While all of the items *may* represent very nearly the facts in the case, as we do not know, we cannot fully indorse them, but give the article for what it is worth:

"While California is the greatest bee-ranching or honey region in the world, owing to the excellence of its climate, and the endless variety of of its honey-yielding flowers, the quality of its honey does not excel, even if it equals, that of the honey produced in New York State." said a large wholesale dealer.

"One of the most extensive bee-culturists in this or any other country," he continued, "is Capt. Hetherington, whose apiaries along the Cherry Valley Creek, in Schoharie county, annually turn out over 100,000 pounds of the choicest honey. It takes nine men and two steam saw mills five weeks to prepare the lumber for the boxes in which the honey is made by his bees. Nearly 150,000 panes of glass, about six inches square, are used in these boxes. Capt. Hetherington has at work, this season, nearly 2,500 colonies of bees. These are not all on his own premises, but are scattered among the orchards and fields of farmers along the creek, to whom he pays a rent for the privilege of his bees working in the clover, buckwheat, or whatever blossoms are in season on the farm. The care of these bees does not fall upon the owner of the land. Capt. Hetherington keeps men and teams constantly employed looking out for them. He has received as much as $26,000 for one season's crop.

"Another large York State bee-keeper is C. B. Isham, of Peoria. Up to 1879 there was no market in England for American honey. The English dealers would not handle it, and the periodicals devoted to the bee-keepers in that country, cried it down in every possible way. The reason for this was that they knew the superiority of American honey, both in flavor and appearance, over the British article, and were aware that if it was once introduced in London, it would be a great blow to the trade in the home supply. There was a smart Yankee named Hoge working for a grocery in this city, and he assured his employers that, if they would give him the commission, he would manage to place American honey on the English market. A large lot of Isham's honey, which the firm was then handling, was packed, just as it came from the hives, and Hoge was sent to London with it. He found he needed all his Yankee ingenuity and accuteness, for he met with universal opposition among the dealers. He labored with them for weeks to no purpose. In conversation one day with the proprietor of the hotel at which he stopped, the latter told Hoge that if he could manage to have his honey introduced upon the table of Queen Victoria, it would solve the problem at once, for if she was pleased with it, she would communicate to Hoge through the Lord Steward. This communication once made public, would make American honey the fashion in England.

"A former Lord Steward was a friend of the hotel keeper, and was at that time engaged largely in the manufacture and sale of pickles. This man the landlord introduced to Hoge. They dined together. Hoge gave the pickle man an immense order for his goods, to be sent to the American grocer. More wine followed, and before the ex-Lord Steward went away, he promised to use his influence to have the American's honey introduced on the royal table. He succeeded in inducing the then Lord Steward, Sir John Cowell, to accept a box of honey for the Queen, and to serve it on her table. The Queen was so delighted with the honey that she directed the Lord Steward to present her thanks to the donor, to order a supply of ten cases at once, and to keep American honey constantly on the royal table.

"Hoge lost no time in making this communication public. The consequence was, that the opinion of American honey changed at once, and Hoge came back to New York secretly laughing at the Britishers, but rejoicing over an order for 500,000 pounds of American honey for the English markets, which he carried in his pocket. The demand for it has increased ever since, and the trade that was started in New York State honey is now largely shared in by the California product.

The Use of Comb Foundation.

A correspondent of the *Farmers' Gazette*, Dublin, upon the question of comb foundation for storing honey and for brood says:

The Germans, for the past twenty years, have used impressed sheets of wax as a foundation for comb. The bees thin out the so-called foundation to the natural thickness, and use up the shavings to form the walls or cells in which the queen deposits eggs and the workers store pollen and honey. The bees thin it so accurately that epicureans cannot tell comb honey with such foundation from that wholly made by the bees. The most promising use of comb foundation is in the brood chamber. It is astonishing how rapidly the bees will extend the cells and the queen fill them with eggs, exactly five cells to the lineal inch, or twenty five to the square inch, when used for worker brood solely. The real advantage is to ensure worker brood, and to furnish wax, that the bees may be free to gather honey and store it, instead of elaborating wax.

If we wish to test the actual value of foundation, we select two strong colonies of bees; we supply one with comb foundation and withhold it from the other; we find this last sends fewer bees to the field, as the majority are engaged in the art of wax selection. The other colony, furnished with the so-called foundation, gains much more rapidly in honey, with less food consumed. Foundation is becoming so popular and is made of better substance than formerly, whole sheets can now be used; and when we bear in mind that it takes twenty pounds of honey to produce one pound of wax, it will be seen that the bee-keeper who uses comb foundation largely, has an immense advantage over one who does not. This foundation was originally imported from America, but now it is made in Ireland.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

CORRESPONDENCE.

For the American Bee Journal.

Hiving Swarms of Bees.

G. M. DOOLITTLE.

After reading W. Z. Hutchinson's article under the above heading, in a late number of the BEE JOURNAL, I cannot help but think that he and others do not understand how to treat swarms issuing with queens having clipped wings. The ease with which natural swarming is conducted where all the queens have their wings clipped, is one of the greatest reasons I have for clipping queens' wings.

Because the queen has her wing clipped, it does not follow of necessity that the swarm must be hived on the returning-plan, nor that the queen should be lost in the grass or stepped upon as Mr. H. says; for, in an experience covering a period of 14 years with every queen's wing clipped in my apiary, I have yet to step on, or lose the first queen from any cause arising from her having a clipped wing. In fact, I am so well pleased with the plan of natural swarming, with queen's wings clipped, that I am led to give my plan of treating such swarms, so that the reader may compare it with Mr. H.'s, and thus decide which to adopt. If I shall so explain it that any of the cares and burdens of my fellow apiarists are lightened, I shall feel well repaid for my effort in the explanation.

Before proceeding, I wish to say that Mr. H. has given us the best article on hiving bees where the queens are allowed to go with the swarm, that I have ever seen in print; for he gives us a view of some of the hard work, climbing of ladders, despoiling of an orchard by sawing off limbs, etc., which always attends that plan; and had he told us of swarms settling on the large trunks of trees, and in other places where scraping and smoking the bees off was the dernier resort, the picture would have been complete.

For the past five years I have hived very few swarms by the returning-plan, but when I do the plan is thus: When a swarm is seen issuing, I (or Mrs. D.) step to the rear of the hive and then look on the grass to one side of it to see if there are many bees there, thereby indicating the presence of the queen; and if not, step up on that side and glance over the ground in front of the hive. If the swarm has nearly done issuing, the queen is readily found by a little cluster of bees being about her. If just commenced to swarm, look at, or near the entrance where she will be seen running as soon as she comes out. Have on hand a round wire-cloth cage, 1½ inches in diameter by 8 inches long, made by rolling a piece of wire cloth around a stick, and sowing the sides together, when a stopper is to be fitted in each end.

As soon as the queen is seen, place the cage in such a way that she will crawl into it, and if a few bees go in with her, all the better. Now move the old hive back, and place in its place the one which the swarm is to occupy, when the cage with the queen is to be laid near the entrance. Place the old hive where you wish it to stand, or move it up beside the new hive at right angles, *a la Heddon*, as you prefer. Have on hand two sheets, one of which is to be placed on each of the hives on either side nearest the one now awaiting the swarm, so that they can be spread over them should the swarm attempt to enter these hives upon returning, which they rarely will do if the queen, with a few bees, is left at the entrance of the new hive. Leave the queen caged until nearly all the bees have entered the hive (or become clustered on the outside, as they sometimes will do), and are quiet, when you will let the queen go in. By thus keeping the queen caged, you will avoid the difficulty of her running out, and the bees with her, as spoken of by Mr. H.

If they are clustered on the outside of the hive, let them become quiet after the queen is out of the cage, when you will detach a few and start them to running into the hive; then detach more bees, and so on until all have run in.

If several swarms come out together, more sheets are needed, so that if more than the right proportion of bees draw toward one of the new hives placed on the old stands, a sheet can be thrown over until they go as you wish them to. But, as I said at the outset, this plan of hiving does not necessarily follow having the queen's wing clipped, although many prefer it. The simplest plan, and the one I use most, is to go to the woods and cut a light, tough pole, which will reach to the top of my tallest tree, providing that it is not more than 20 to 25 feet high. If swarms attempt to cluster higher than this, I always use the returning-plan above given. Have the large end of this pole sharpened so it can be pressed into the ground when necessary. Near the upper end of it fasten a few dry mullien tops, or a roll of black rags, as large around as your arm, and a foot long, when your pole is ready.

When a swarm issues, proceed to get the queen as before, and when caught, secure the cage to the black bunch at the top by means of a bent wire. Raise the pole in the air, and keep it where the bees are the thickest, when they will often alight on the pole; and if not, they will soon select a spot to alight upon the same as they would if the queen was flying with them, for her presence is known to them just the same as if she had her wing whole and was among them.

As soon as they begin to alight, place the pole in such a position that the queen and black bunch comes in the place they are clustering, and leave it thus while you are preparing a hive for them. When they are partially clustered, raise the pole, or push it up and out, so that the queen and bunch of rags, with the bees on them, is a foot or so from the limb, when all the bees will cluster with the queen; after which you can carry them wherever you please, the same as Mr. H. does his branch after he has cut it off.

You should also hive them as he tells you, by first detaching a small part of the cluster, and after they start up the call of a "home is found," detach more, and lastly let the queen go in.

No matter in how bad a place they cluster, the operation of getting the swarm on the pole is always simple, and there is no need of being in a hurry, for they cannot go to the woods if left hanging on the pole in the hot sun all day; for should they attempt it, they would soon come back to their queen, as I have often had them do.

Now we will suppose that the second, third or fourth swarm issues before you get ready to hive the first (a thing which very often happens), you have not got to work as did Mr. H. with his fountain pump "till you are almost in despair" to keep them apart, but simply let them cluster on the pole, and you are at liberty to prepare the second, third, or fourth hive, as the case may be, leaving a queen in front of each hive except the first, as that has the queen on the pole. When all are clustered, take the pole and carry it to one of the hives having a queen in front of it, when you will proceed to hive them as at first, till you have got the right proportion of bees for one hive, then go to the next, leaving enough for a colony there, and so on until all are hived as you wish them.

All is done with a perfect ease and certainty, which no other plan can give. I often leave the bees hanging on this pole two or three hours, or till I get other pressing business done, when I hive them at my leisure; the only caution being necessary is to see that the pole is so fixed that it cannot break from the great weight of bees, and that the queens not with the cluster have a few bees with them to feed them, or are otherwise fed.

Again, if I wish to hive two or more swarms in one hive, as I frequently do in the latter part of the honey season, I do not have to hunt out the queens, for one is kept with the swarm, and the others I let go back into their old hive.

One more item, and I leave the subject. Many seem to think there is danger of losing the queen when her wing is clipped, if a swarm issues when the apiarist is not at home; but such is not the case, for some of the returning swarm is sure to find and cluster about the queen if she does not get back. When I return, after an absence, I go over the yard, between each row of hives, looking on the ground, and if a swarm has issued, and the queen failed to return, I find a little knot of bees on the ground from the size of a butternut to that of a goose egg, in which will be the queen. Now comes the perplexing part to many, which is, to find where a swarm found hanging on a limb, or where such a queen came from. In case of the queen, I leave her where she is until nearly sunset, so there are but few flying bees in the air, then she is taken from the bees, when they will go back to their hive, setting up a joyful hum, after which I let the queen go with them.

In case of a clustered swarm, I hive all but a half pint or so of bees, which are kept in a cage till nearly sunset, when they are let out, and tell me, as did the others, just the hive the swarm came from.

In the above I have given a few of my reasons for preferring queens with clipped wings, and I am willing to leave the matter with the readers, to choose which they prefer after having a fair hearing of both sides of the question.

Borodino, N. Y.

For the American Bee Journal.

Reversible Frames Again.

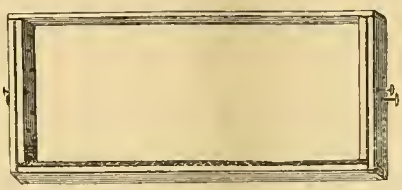
A. H. DUTTON.

It is now an admitted fact by many apiarists, among their number being some of the largest and most successful honey-producers on the American Continent, that under certain circumstances brood-frames, capable of reversion, possess advantages which do not belong to the ordinary style of suspended frames. Such being the case, the question would naturally arise, with those who are unaccustomed to their use, "What are the most feasible methods of making the various patterns of suspended frame reversible? and what are the conditions under which they can be employed to advantage?"

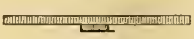
Without attempting to answer the last inquiry, which has already been done very fully by various writers in the different bee-periodicals, I shall meet the first question in detailing a system for reversing frames which for simplicity, thorough practicability, ease of application to any style of frame, and inexperience, is ahead of anything I know of in this line.

Presuming that the frame which you wish to make reversible, is the Langstroth, cut off the corner projections and straighten the end-bars by inserting inside the frame in close contact thereto, strips of wood, tack them securely in position (the bars at the ends of the frame are now about ½ inch in thickness); next drive two stout wire nails, each about ⅜ of an inch in length, parallel with each other, into the outside of the end-bars of the frame; do not drive them clear in, but allow them to project ⅜ of an inch, and insert the nails across each end of the frame exactly in the centre (see diagram). This completes the arrangement of the frame.

We shall now observe a slight change in the hive itself. The metallic edges on which the projecting corners of the ordinary suspended frames rest, is removed from their position on the rabbeted edges of the inside end-walls of the brood-chamber, and transferred to the middle of the walls, so that when the nail projections of the prepared frame rests upon them, the top of the frame will occupy the same level in the brood-chamber as it does when the usual style of frame is employed. The metal strips should stand out from the walls ⅛ of an inch.



To secure this result effectively and easily, cut two strips of card-board about 3-32 of an inch in thickness and ⅜ of an inch wide, and the whole length of the inside end-wall of the hive, and tack these lightly in position ⅛ of an inch below the centre of each end of the brood-chamber. Now tack the metal strips, which should be ½ of an inch in width, and the same length as the card-board strips, securely over the latter, leaving ⅛ of an inch projection above. (See diagram.) This finishes the reversing fixtures.



It will now be found, on trial, that the frame will securely rest by the nail projections on the metal rabbets, whether top or bottom be uppermost; and that the reversing of the same consumes no more time than it takes to turn the frame over in the hands after it is removed from the hive. It is free from sharp points and edges at the corners (which, in my opinion, are objectionable in any style of frame), and when in the hive its lateral motion if anything is more perfect than the usual style of suspended frame; and now I think I have said as much as can be mentioned in favor of any pattern of reversible frame.

Brussels, Ont.

From the Los Angeles News.

Production of Surplus Honey.

DR. E. GALLUP.

I wish to describe my method of managing bees for surplus honey; and in this climate we must commence to put them in condition by the middle or the last of February. The first thing is to select the colonies which are desired to breed from, and then build them up strong by fitting the brood-chamber with frames well filled with hatching or sealed brood, from other colonies; and when the weather is not favorable for gathering food, I feed them a little every evening, so as to keep the queen at her work. Then I examine every colony, and any that does not equal my expectations, I ascertain the cause, and if the fault is in the queen, she is killed just as soon as I can succeed in getting natural queen-cells; for I prefer the natural to the artificial queen-cells whenever they can be had, and especially early in the season.

Now, just as fast as I get young laying queens, I build the bees up, until the time the honey harvest commences; either by placing empty combs as fast as needed, in the centre of the brood-nest for the queen to fill, or by giving brood from other colonies to strengthen up; and as soon as the brood-chamber is well filled with brood, providing the honey harvest is on hand, I put on the supers; otherwise I sometimes take a frame of brood to strengthen a weaker colony. I never think of putting on the supers until the brood-chamber is completely filled with brood.

Every young queen that begins to lay in March, produces, by the above plan, an excellent colony for storing surplus, as there is scarcely any disposition to swarm. If the colony is as it should be, many of those young queens will require two supers, as one will not give sufficient room for the amount of bees she will rear. All the old queens that are saved in the apiary, must be built up strong, by spreading the combs judiciously, and inserting an empty comb in the centre of the brood-nest for the queen to fill with eggs; for, remember, that almost double the amount of eggs can be secured by so doing, than if they are left to manage their own affairs.

In a good season every colony can be brought up to the standard, and the swarming all done by the middle of April. I prefer the natural swarms if they come early, and when artificial swarms are made, I give the division natural and nearly mature queen-cell. If I want any increase, I allow all colonies that swarm early, to swarm two or three times; because every young queen that I can get to breeding early in March, can be brought up to the standard in time for honey gathering.

If I do not want increase, I get as many young queens in the place of old ones as I possibly can. In a poor season every colony cannot be built up in time for surplus; because I take brood from some colonies to build up others for surplus. Those which I take brood from, I only calculate to make into profitable colonies for wintering.

Now, understand that if honey is wanted, we must have bees, and any colony that is strong in bees will store honey, even if there are not over a five-days' honey-flow in the season. How is it that Mr. Doolittle manages to get a crop of surplus honey every season in a comparatively poor locality? Simply by managing his bees on a plan similar to the above.

I want all the supers taken off by Feb. 1, so as to confine the animal heat in the brood-nest; and supers should be put on only as fast as the bees are in condition to occupy them. Now, providing the weather is favorable, we can put in one or two frames of foundation at a time in each hive, and have the queens fill them with eggs. A frame of foundation filled with eggs by a good Italian queen, is a sight worth looking at; and I have always had the best satisfaction in having them filled in the breeding-season, early before the honey-flow commences.

You will probably say that the above plan makes work; but for what are we keeping bees if not for profit? and if we expect to have profit, we must work for it. The man who keeps bees and does not work with them, and yet expects profit, will always be disappointed. How is it that Mr. Miller, of Bell Canyon, always has a crop of surplus honey every season? Last season he had eight tons, while some of his neighbors had nothing? He worked with his bees. His bees never starve to death by the wholesale as some of his neighbors' bees do. In all my life-long experience in bee-keeping, I have always found that bees are self-supporting in the poorest season, if properly managed; and I have had experience in bee-keeping in Canada, Vermont, Wisconsin, Northern Iowa, and now three years in California. In some seasons and localities I have had to stimulate my bees by feeding them in the summer, but have never had to feed them in the fall or winter. I always save the poor honey which is unfit for market, and feed it to the bees.

For the American Bee Journal.

Overstocking a Locality.

J. E. POND, JR.

The question of overstocking has been more or less of a bug-bear, with a few, since I first began to keep bees, nearly 20 years ago. Every little while some poor fellow, fearful, I suppose, that all the honey yielded by the flora of the country, would be gathered by others, and none left for him, would raise the cry of overstocking, and over-production.

What are the facts which the last 20 years have shown? First, bee-keeping, as a business, has grown enormously; hundreds now pursue it successfully where only one was engaged in it when the BEE JOURNAL first started into life; and not only has this large increase been made in the accession of members to our ranks, but by means of better and more advanced methods, hundreds of pounds of honey are now produced as a consequence of these improved methods, while under the old regime, hardly a pound of surplus was obtained.

Now, if these results have followed during 20 years, and I defy any one to prove the contrary, what need is there to fear overstocking in the future? "But," the reply comes, "we do not mean overstocking in the whole country, but certain small areas that we call our feeding-ground whose radius is equal to the flight-range of our bees." Well, what danger is there of overstocking even that territory? A single acre of white clover will furnish, in a good season, at least 100 pounds of surplus each to 25 or 30 colonies. Spin this out to a diameter of 8 or 10 miles from a given location, and it is easy to be seen that it will take more bees than by any possibility will ever be kept in a locality, to overstock it.

But who can determine this question of overstocking? and *how* can they determine it? In a poor season, when the flowers yield no nectar (and we do have such seasons), a very few colonies might starve, not because the locality is overstocked, but because there is no honey to be gathered. Has any one ever considered for a moment the state of things that must necessarily exist, in order to overstock a locality? Simply this: It is well known that the flowers are constantly secreting nectar during the time they are in bloom, and this nectar, in order to be utilized as honey, must be gathered at once, or it will evaporate. If a certain flower secreted a certain amount of honey, which, when gathered, exhausted its supply, then there might be some strength in the argument in favor of overstocking, but such is not the case; for the nectar thus secreted must either be gathered at once, or it evaporates and is lost, and in either case a fresh supply is at once secreted to supply its place. In about five minutes after the nectar has been gathered from a white clover or other blossom, more is secreted, and sufficient to load up any bee, even if it is as large as "*apis dorsata.*"

Now, to overstock a locality, every honey-yielding flower within that locality must be visited by a honey-bee oftener than once every five minutes during the duration of its bloom. I, myself, do not know the number of colonies of bees required to accomplish this work, but it is easy to see that it will require an immensely larger number of colonies than it is at all presumable will ever be kept in any locality, either by one or many persons.

When I first began keeping bees, I had some fears in regard to the matter; but as I have seen the business increase, and the honey yield increase ten times more largely in proportion, than the increase of bee-keepers, and that, too, without glutting the market, or causing any falling in prices, I have concluded that the danger is fancied, and not real; and more particularly do I so conclude when I find that hundreds of colonies are kept at a profit in our large cities, where it would naturally be supposed that no honey at all could be gathered, unless yielded by stones and bricks. Some localities undoubtedly give larger yields than others, but that is a matter of chance or design in the growth of honey-yielding plants and trees, and does not in anywise form a factor in the problem under consideration.

Foxboro, Mass.

For the American Bee Journal.

A Visit to G. W. Demaree's Apiary.

W. T. STEWART.

On July 5, I made a visit to Mr. G. W. Demaree's apiary, where I remained two days and nights. As the readers of bee-papers are "well aware" he is an enthusiastic writer, and if you will pay him a visit, as I have done, you will at once see that he is enthusiastic in the whole business of bee-culture, especially the rearing of fine queens. Mr. D. is a lawyer and farmer, and has plenty of this world's goods, and no children to leave it to; so he has almost given up law and farming, and concentrated his whole time and talent upon bee-culture.

His apiary consists of about 180 colonies and nuclei; very tastefully arranged. He prides himself very much upon his improved Italian bees, and well he may, for his Italians are indeed beautiful. He and the Cyprians have had so many "ups-and-downs" and disputes as to who should "boss" the apiary, that he has discarded the breeding of them, and breeds only Italians.

He uses the Jones' perforated zinc or drone-excluder, and says that it is a perfect success, and I agree with him in this. He took me out to his sweet clover field, which is so thick and tall that it is nearly impossible to go through it, and the bees were making it fairly hum. He uses a half-story (that is a story half the depth of the Langstroth) for extracting purposes. The combs are shallow and straight, and the bees fill and seal them very quickly. When full he lifts the whole set off and puts them into his extracting-room, in which there is a bee-escape, and in a short time the bees leave it and go home, when it is ready for the extractor; thus he saves the labor and time of brushing bees from the combs in the hot sun. The plan is a good one, and in the future I shall use it largely in my own apiary.

He has horse-power and also foot-power machinery for hive making.

In passing through his queen-rearing department, I stopped to read on the slates, which hung on each hive, but they were embellished with hieroglyphics only, such as none could read, but he understood them.

I expected to see many things at Mr. D.'s apiary that were new to me, he being a sort of natural genius, and in this I was not disappointed. Many a little idea I caught and stored up in my memory for future use. Mr. D. is an incessant talker, and talks about bees from the beginning to the end. He despises meanness in any form among bee-keepers, and lives up to the old adage, that "Honesty is the best policy."

Mr. D. is president of the Kentucky State Bee-Keepers' Society, and we may naturally expect that he will spare no pains in getting up a good programme for the fall meetings. We hope that he and Dr. Allen, the secretary, will arrange to have a bee and honey show at the beginning of the Exposition at Louisville, and also at our regular fall meeting at Eminence, Ky. Right here let me say to Kentucky bee-keepers: Let us each donate any amount that is necessary, to raise money enough to offer large premiums on the best display of honey, bees, etc., such as is customary to give premiums on; and then let us get up a rousing show. All try to get the premium by an energetic effort

As many of us know that swarms have, very frequently, deserted the hives after being hived, this season, and bee-men have different theories as to the cause of it.

After experimenting a good deal, I believe I have found the cause to be the absence of pollen in the new combs for use in rearing brood. Just at the swarming season there were no flowers in bloom that yielded pollen, and on examining many new combs, after the bees had deserted them, I found them full of eggs and entirely destitute of pollen. I then hung old combs containing pollen, in each hive, and not one swarm deserted after so doing.

I proved to my satisfaction that the reason bees or swarms desert their hives is because they have not or cannot get pollen at the time.

If I knew of a good place to which to move 75 colonies of bees, in order to secure a fall crop of honey, I should be pleased to try the experiment, as I am now ready to do so, and then report whether it pays to practice migratory bee-keeping.

Eminence, Ky., July 8, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Comb Honey, or Extracted?

1. Which is preferable, producing extracted honey at 12½ cents per pound, or comb honey at 20 cents per pound? markets and all else being equal.

2. After extracting, at the close of the season, do you let the bees clean the empty combs before storing them away? If so, how do you manage it so as not to induce robbing?

3. Would we not, as a rule, get as straight combs in your cases of 4¼x4¼x1⅝ sections with ½ inch starters, as if the full-sized were used?

M. F. TALMAN.

Rossville, Kans., July 19, 1884.

ANSWERS.—1. Much depends upon the individual and the location. In regard to what respects, see another answer in this, or perhaps the next issue. As a general thing, I think I should prefer producing extracted honey at the prices you quote.

2. No; I do not. A good extractor will throw them clean enough for all practical purposes.

3. I think you would, but you would get drone comb, and lots of brood in it, if you used full sheets of worker foundation below, unless you also used a queen-excluding honey-board. A letter, just this moment opened, from a bee-keeper of experience and close observation, contains the following paragraph: "I have used a good many sections with V-shaped foundation starters, all of which are built perfectly straight and even, and mostly drone comb. There was no drone comb below, and still the queen did not go above to occupy drone comb in the sections. I account for it by the use of a good honey-board."

Small Black Ants in the Apiary.

Will the small black ant injure or annoy my bees in any way? Can you tell me what to do to prevent their climbing on the bench? L. HOYTE.

Tuscarora, N. Y.

ANSWER.—You need not be at all alarmed by the presence of ants about your hives. The bees will not let them come inside. They are working around crevices and in dead-air spaces where they enjoy the heat from the colony which assists in developing their young, etc. As our hives are so constructed that all surfaces are either next to the bees or out-door air, we never find them any more concealed about the hives. Sometimes they bother us slightly by attacking our surplus honey after its removal. There are various methods of preventing their annoyance in this respect. We usually crate our honey at once, in ant-proof crates. Where this is not done, some pile it on tables and benches whose legs are in dishes of water. Some poison them with insect powder, etc.; but I would not advise it, as the poison might get into the honey. We have built a new honey-house with stone foundation, and it is ant-proof except at the doors and windows, and we have no trouble from ants whatever. Keep things clean.

Bees Uncapping Honey.

1. What is the cause of bees uncapping the honey after capping it over once?

2. Which is the best way of getting the bees out of the boxes that are filled with honey? J. HURST.

ANSWER.—1. A sudden cessation of the flow of nectar, and at a time when the brood-combs are not crowded with honey, especially in large hives. The bees seem to fear being caught in winter quarters with their honey in an unavailable position.

2. Answered on page 458, present volume.

Transferring Bees.

1. Will Mr. Heddon kindly explain the "driving" process, as practiced by himself, in transferring bees from box to movable-frame hives?

2. What is a "hiving-box?"

BEGINNER.

ANSWERS.—1. To drive a swarm of bees from a colony, if in a box-hive, we turn the hive bottom upwards, (after smoking the bees,) and place an empty box on top of the hive (or what was the bottom), and by drumming on the box-hive, the bees, and nearly always the queen too, will desert the combs, going up into the box. The drumming must be radical, after striking the hive, so as to jar its whole contents. This forced swarm can be hived the same as any swarm, only it must be placed upon the old stand, the old box-hive being removed to the new stand, as a forced swarm will not so readily mark and accept a new location; most of the bees returning to verify Father Langstroth's axiom:

> "A bee removed against its will,
> Is of the same opinion still."

2. In these days of improved hives, we do not go after a swarm with the hive, but place the hive on its future stand, and go after the swarm with a box or basket arranged and kept for that purpose, and it is designated "hiving-box" or "hiving-basket."

SELECTIONS FROM OUR LETTER BOX

When to Sow Sweet Clover.

When is the best time to sow sweet clover? If sowed in the fall, will it bloom next year? I have 16 colonies, and have no pasture for them.

Venice, Ill. H. C. SMITH.

[Sow any time. If sown early in the fall, it will soon come up, and bloom in the following July. Fall sowing is best, because it saves one year's time.—ED.]

Basswood a Complete Failure.

The harvest is past, and bees have gathered only about ¼ of a crop. White clover has been quite plentiful, and we have had all kinds of weather, but it did not seem to affect the secretion of honey. Basswood was a complete failure. I moved 60 colonies to a belt of basswood trees, and I can bring back all the honey in one keg. Let bee-keepers in different parts of the country report, so that we may be guided in selling the small amount of honey which we did get.

JAMES NIPE, 137.

Spring Prairie, Wis., July 24, 1884.

Satisfied.

I have received that beautiful book entitled "Bees and Honey," and have read it carefully and with pleasure. I would not take five times the price of it, to be without the information I have gained from it. The Weekly BEE JOURNAL comes regularly, and is highly appreciated. Z. WELLS.

Sheridan, Ark., July 16, 1884.

Introducing Virgin Queens.

I have discovered a very valuable method of getting a colony of bees to accept a virgin queen, which is as follows: Take a hollow tube with an opening large enough to receive the upper end of the queen-cell. Cut open the upper end and put it into the tube about one-half the length of the queen-cell. Then cap the lower end with a thin skin of wax, put the queen into the tube, and close it up with a sponge saturated with honey for the queen to feed upon, and put the whole thing between the frames where the queen is to be introduced.

Any colony of bees will accept a virgin queen as soon as they begin building queen-cells, which will be in about 24 hours. In most cases, I have succeeded immediately after their old queen was removed from them. I think that it is the best plan I have ever tried, and would be pleased to know what others think of it. So far, bees have done but little work. I have about 1,000 pounds of honey, and 25 swarms from 80 colonies. To-day is the first good honey day that we have had since basswood began to bloom, and I judge they will gather 10 pounds per colony within 24 hours. If this weather holds out for 4 or 5 days, we will have a crop of honey from that source; and if we get a shower of rain, clover will yield honey for 2 weeks or more.

A. Wicherts.

Mattison, Ill., July 19, 1884.

Wolf-berry.

The bees which were wintered in dry, well-ventilated cellars, in this locality, came through in good condition. The spring was cold and wet. I had my first swarm on May 28. Bees have done well on raspberry, clover, and a plant of which I enclose a specimen. It grows in thick clusters about 3 feet high. What is its name? Linden has been in bloom 5 days, and the bees are busy. Jos. Gilbert.

Mankato, Minn., July 11, 1884.

[The plant is *Symphoricarpus occidentalis* or woolf-berry—a good honey plant.—T.J.Burrill, Champaign, Ill.]

Wiring Foundation Unnecessary.

I have been experimenting with comb foundation, this season, and find that wiring it is entirely unnecessary. I fasten the foundation in frames, and place them in the top stories of hives which contain strong colonies, and let the bees draw it out, say half-brood thickness. If they store some honey, all the better, which will set up the young bees in house-keeping. Then place the frames in a new hive to put the bees on. There will be no warping or sagging, and I think it is much easier and cheaper than using wire. I hope Mr. Heddon will give this plan a trial, and report through the Bee Journal.

Peter Brickey.

Lawrenceburg, Ky., July 19, 1884.

Quick Work.

On Saturday, May 31, at 12:30 p. m., I hived a swarm of bees on empty combs. On Monday, June 2, at 8:30 a. m., they had gained 30 pounds, all from apple bloom.

H. E. Mitchell.

Greece, N. Y., July 13, 1884.

Honey Dearth Now.

Bees are not doing very well in Eastern Ohio. The weather has been too dry; we have had but little rain since the first of April. Bees have nothing to gather honey from.

Jacob Oswalt.

Maximo, O., July 18, 1884.

Bees with Diseased Feet.

I send you some bees that have diseased feet. It is something new to me. The bees are taking them out of the hives and carrying them off at a rate which will weaken them very much in a short time. I wish to know the name of the disease and the remedy, if there be any.

W. W. Trussel.

Colby, Mich., July 15, 1884.

Answer.—The bees are weighted with the pollen masses of the *Asctepias* or milk-weed. This is illustrated in my Manual. I think the losses from this cause are not great, while I am sure that milk-weed is an excellent honey-plant. The bark-lice on maples and other trees can be washed off, in cities, where they have high-pressure water-works, by turning on the hose. The grovied females in May, and the young lice in June, may easily be overcome in this way.

A. J. Cook.

Lansing, Mich., July 19, 1884.

How to get rid of Ants.

Two years ago I struck upon the plan that is often used for rats and mice. I mean poisoning. Thoroughly poison a small quantity of meat or honey with arsenic or strychnine, and put it in wire-cloth cages, or in some way manage to keep it from every thing else, and place it in places frequented by the ants; and they will quickly vanish, at least mine have.

Saugatuck, Mich W. B. House.

Fastening Starters in Sections.

If the top piece of the section is rubbed with wax, and the foundation put in moderately warm, the starter will be perfectly fastened, and with very little pressure. We use a Clark fastener, and have no further trouble with falling starters, since pursuing the above method. Bees have done well on white clover, in our vicinity, but we fear that basswood will be a failure. The weather has been cool and cloudy during the past week, thus checking the honey secretion; but clover still looks well, and, with favorable weather, may continue to yield honey for some time.

Libbie Long.

Williamsville, N. Y., July 18, 1884.

Bees Not Busy.

Bees are doing but little work now. White clover was almost a failure. Our main hope now is on heart's-ease.

J. W. Margrave.

Hiawatha, Kans., July 21, 1884.

Basswood Abundant, No Honey.

With us the honey season has closed, and we have to report only ⅓ of a crop. No swarming this year. I have 80 colonies which I fed heavily during April and May, and all were exceedingly strong. They made a good start on locust, and filled their hives fit for winter, when the white clover came on in abundance; but it rained continually, and north winds prevailed during June. We hoped to have a good flow of honey from basswood bloom, as the bloom was unusually abundant; but it came and went, never a bee looking at it. North winds have blown cold during the whole month of July, so far, and the mercury settles down to 38° and 40° above zero every night. Although my colonies have been extra strong all the season, only 5 swarms have issued, and now the colonies are idle and listless, killing drones, etc. None but experienced bee-men have a drop of surplus honey. E. A. Morgan.

Columbus, Wis., July 21, 1884.

Honey-Dew Honey.

Bees are not doing well at present. My big crop of white clover honey proved to be honey-dew honey. Everything looks favorable for a big honey crop this fall, if it is not too cold; but what the result will be, I cannot foretell. Many of my customers say that they like the honey-dew honey better than any other that they can get.

D. R. Rosebrough.

Casey, Ill., July 18, 1884.

Uncapping Knife.

Do all who have occasion to use the honey uncapping knife know how much nicer and easier it works if kept immersed in hot water as much of the time as possible while in use, or even dipped occasionally? Let those who have never tried the plan do so, and if not pleased I will be surprised. "Typo."

[Yes; that is the most approved method, and has been so stated many times in the Bee Journal during the past few years.—Ed.]

Bees Gathering Honey-Dew.

Bees have been gathering large quantities of honey-dew of late, but it is poor stuff. On the whole, bees have done fairly well so far.

W. H. Stout.

Pine Grove, Pa., July 21, 1884.

Accidentally Disabled.

In the spring of 1883 I commenced with 22 colonies of bees, from which I received about 1,200 pounds of honey, and increased them to 44 by natural swarming. I sold 3 colonies, and wintered the balance without loss. Of these I lost one after placing them on the summer stands. The result of the season up to July 1, was only a little over 600 pounds of comb honey, with enough left, perhaps, to supply a family of nine members. Why my bees have done so poorly, I cannot tell. They were nearly all in fine condition when white clover began to bloom, and the bloom was quite profuse. From my 40 colonies I have had but 4 swarms, thus increasing my number to 44, 33 of which I sold about July 1. I think that bee-keeping is a pleasant occupation, and though my profits have been small, I have taken considerable delight in the business. But from the fact of having been almost totally disabled in my back, by a horse which, in 1880, fell with me

with my foot hanging in the stirrup, and dragging me on the frozen ground at a fearful rate of speed until I was crippled, perhaps for life, I have thought it best to retire from the bee-business, at least for the present, and keeping only a few colonies for family use. With best wishes for the continued advancement of this ever increasing industry, I now withdraw from the active duties of the business.
F. M. Reeds.
Hindsboro, Ill., July 18, 1884.

Hybrids Better than Italians.

I have 28 colonies of bees in two-story chaff-hives. On June 10, from 2 hybrid colonies I extracted 56 lbs. of honey, and from 8 Italian colonies, 196 lbs. I think the hybrids cannot equal the Italians in honey-gathering. I sold 100 lbs. of the honey at 12½ cents per lb., which was shipped, and the balance in my home market at 15 cents per pound.
Chas. Haas.
Lower Salem, Ohio.

No Basswood Honey.

Bees have done well here until June 20, when there was a sudden cessation of the honey-flow. Some farmer's colonies swarmed as many as 4 times. There are a great many bees in Atchison County, Mo., and Southern Iowa. Rocky Mountain bee-plant grows in large quantities on the bluffs of the Missouri river, and bees do well when it is in bloom. We have hundreds of acres of goldenrod and other fall flowers. I am now Italianizing my colonies for the purpose of rearing queens. I have 34 colonies. Basswood was a total failure this year.
Chas. Harrold.
Hamburg, Iowa, July 21, 1884.

Neither Increase nor Surplus.

On page 452, migratory bee-keeping, as practiced by Messrs. Flanagan and Baldridge, is described. I received 90 colonies of bees from Mr. Flanagan, of New Orleans, La., on June 18, 1884. They were entirely destitute of stores, and depleted in numbers; and having arrived in the midst of the white clover bloom, they soon filled their hives with nice honey, but have yielded no increase or surplus, as we are having a severe drouth—there having been no rain for 4 weeks. Basswood has yielded no nectar this season, and the outlook is discouraging at present. Large numbers of bees are working on over-ripe red-raspberry fruit, and searching everywhere for nectar. They are killing drones and carrying all drone-brood out of the hives.
S. J. Youngman.
Cato, Mich., July 20, 1884.

"Tree-Trunk Method of Wintering."

According to my declaration as an expert bee-hunter, Mr. W. F. Clarke's article has brought to my mind some of my past experience in tree-trunk wintering of bees. Last fall I knew of 6 bee-trees, 3 in Ohio and 3 in Pennsylvania, in which all of the bees died during the past winter. Had they lived, I intended transferring them into hives. I know of another tree which contained bees every year for 15 or 20 years, and the bees died during every winter for that length of time, when another swarm would occupy it as soon as the next swarming-season arrived. As the tree had been watched for the above length of time, Mr. C., in my humble opinion, and judging from what my experience has taught me, must find some other theory than "tree-trunk wintering," before he can claim the championship of making a grand discovery. With the best of feeling for Mr. C. and his new theory, I should have told the bee-keeping fraternity that the tree of which I spoke on page 459, contained about 1 wash-tub and 3 patent buckets full of honey, besides many combs.
Col. R. Walton.
Industry, Pa., July 17, 1884.

Good Enough.

I have increased my colonies of bees 150 per cent., and taken from them an average of 70 pounds of white clover honey.
A. B. Mason.
Wagon Works, O., July 21, 1884.

Still Hunting.

The honey harvest, in this section, is about ended for this year. We have had an abundance of bloom, but the weather has been anything but what bee-men would desire. The nights have been very cold. I have colonies that swarmed about the middle of June, and have not yet finished their first set of sections. Basswood commenced to bloom on July 3, and I think it is all gone now. White clover will last sometime yet, but I never knew bees to gather much from that after July 20. We have seen some few offerings of comb honey in the market, but none finished well, so we do not think that there will be more than half a crop of comb honey, judgidg mostly from our own. We have waited patiently for Mr. H., of Centre Point, to explain something about the "glucose business." We know he has used large quantities of the article some way; so much so that he cannot sell honey in this market. We do know it has hurt the sale of extracted honey in Cedar Rapids. As we produce mostly extracted honey, and deal in it exclusively, we know what we are talking about. We want to hear from Mr. H. through the Bee Journal.
T. B. Quinlan.
Cedar Rapids, Iowa, July 18. 1884.

Hiving Bees, etc.

I hive swarms of bees somewhat differently than Messrs. Hutchinson and Heddon. My plan is as follows: Take a common peach basket, separate the partially separated staves, that the bees may have ready ingress; also bore the bottom of it full of ¾-inch holes, attach a 6-inch strap to the centre of the bottom of the basket, with a snap of an old suspender, or of a tie-rein of a horse, at the end.—Stick on the inside of each stave, and ¾ of its length, very narrow strips of old comb (lengthwise), and some on the bottom (inside); now have light poles, say two or three different lengths, with a loop on the snap at the end of the strap attached to the end of the pole. When the bees have mostly collected on the bush or limb of the tree, attach the basket to the pole, jar the bees on the limb, hold the basket up so its bottom will touch the exact spot from which the bees were jarred, and the bees will go into it, then carry them to the bee-yard. They are simply collected in a basket instead of on a bush or limb. Put the basket on the frames of the hive, cover all with table or other cloth, shake the basket, and give two or three minutes time for them to run down into the hive. I would not take $20 for my basket if I could not get another. Mr. Heddon also tells us how to draw the bees from the sections. This is my method: Simply place a partition-board between the case of sections and the brood-chamber, first blowing in a little smoke to awaken and scare the bees; then cover the case, except a ¼-inch slot or opening for egress to the outside of the hive. It is best to have it in front. It works like a charm, and as soon as robbers are troublesome, I bore holes in the board at or near the front end of the cap of the hive, and place in the holes for egress, small wire-gauze conical tubes, not unlike Mr. Alley's to his drone or queen catcher.
St. Paul, Minn. Mouch Amiel.

Honey in Mountainous Regions.

I agree with Mr. Pleasants, in his article on page 375, and think the time is not far distant when our valley apiarists will have to be moved back into the mountains, beyond the range of fruit-men; and besides the honey-production is better, and the honey is of a better quality, much clearer than that gathered in the valleys. Not nearly so much honey is gathered along the coast. We also have sections in this county which are overstocked with bees. Within an area of six square miles there are over 1,500 colonies kept; and from observation I have never known any of them to get any where near the amount of honey, per colony, compared to those with smaller apiaries and larger ranges of bee-pasturage. Where bees are left with plenty of honey in the fall, thus leaving but little cold air space, and having a good queen, they come out in the spring strong and vigorous, as such an amount of honey encourages brood-rearing earlier and stronger. They seem to know that they have the "backing" when they have so much honey, the same as a man who has plenty of capital in his business. I have found that to stimulate bees in February or March, in this mild climate, is a great advantage. Last season I experimented in rearing late queens, but found it unprofitable. I have had them fertilized in November, but have had five failures to one success. Drones are generally scarce then, and the winds drive the queens before it, causing much loss, and the result is drone layers, etc., and they do not live as long.
M. H. Mendelson.
San Buenaventura, Cal.

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◆

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For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

☞ Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for $3, or in paper covers for $2.75. The Monthly BEE JOURNAL and the book, $1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is $1.50 bound in paper covers, or $2.00 when bound in cloth.

◆

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

☞ Cook's Manual in cloth and the Weekly BEE JOURNAL for one year will be sent for $3. Manual and Monthly, $2.00. We have no more of the old edition left, and, therefore, the club price of that edition at $2.75 and $1.75 is withdrawn.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports — a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ Letters for publication must be written on a separate piece of paper from items of business.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

☞ The summer meeting of the Lorain County Bee-Keepers' Association will be held in the Court House at Elyria, Ohio, on Wednesday, Aug. 6, 1884. O. J. TERRELL, *Sec.*
North Ridgeville, O.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on the third Tuesday in August, at Leroy Highbarger's, near Adaline, Ogle County, Ill.

J. STEWART, *Sec.*
Rock City, Illinois.

☞ The Gibson County Bee-Keepers' Association, will meet at Trenton, Gibson Co., Tenn., on Aug. 2, 1884. A good attendance is expected.

T. J. HAPPELL, *Sec.*
J. W. HOWELL, *Pres.*

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 28, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—The demand for extracted is fair, and to all appearances, gradually improving. It brings 6@9c per pound on arrival. There is a small demand for comb honey, but we find small offers only, and a good deal could be sold. It brings 14c per pound on arrival.

BEESWAX—Offerings plentiful at 30@32c on arrival. C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—Sales of comb honey continue slow. As yet there are no arrivals of this season's crop. We have received several small shipments of new extracted honey, which sold readily. For prices on this year's crop, we quote: Fancy white, 1-lb., 16@18c; fancy white, 2-lb., 15@16c; fair to good, 1 and 2-lb., 12@14c; fancy buckwheat, 1-lb., 12@13c; 2-lb., 11@12c. Extracted, white clover, in kegs or small barrels, 8½@9c; dark grades, 7@7½c.

BEESWAX—Prime yellow, 30@32c.

McCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2¼-lbs. to 2½-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 8@10c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—This week we have had liberal receipts of comb honey, and the prices are irregular. As a rule, the honey is of first quality, and put up in good shape; a gradual improvement is noted in this respect. Prices range from 14@16c for the best; occasionally a case sells for more than that, but it is in a retail way. The extracted honey is still sluggish, at nominal prices—6@8c per pound.

BEESWAX—Fair receipts; prices, 30@37c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Offerings do not receive any noteworthy attention; there are no urgent orders in the market, and little or no disposition to purchase on speculative account. Honey producers make a mistake to ship their honey for sale to parties not in that particular line of business. Outsiders having lots of honey to sell, run about to find a buyer, and not knowing the market, or the value of honey, offer a little under the market, and when these outside lots get out of the way, our market will have some tone. White to extra white comb 14@17c. Dark to good 10@13c. Extracted, choice to extra white 5@6½c. Dark and candied 4c.

BEESWAX—Wholesale, 27½@30c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—There is beginning to be some demand for new honey now at somewhat better prices. Choice 2 and 1-lb. sections bringing 17@18c; choice old honey 1c less. I am having more inquiry for ½-lb. sections than I anticipated, and I could use a few hundred pounds at pretty good figures. Who has any? Extracted, dull and unchanged, 7@8c.

BEESWAX—30@35c.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—There are some arrivals of new honey which is very nice, unusually so. Our market does not seem to be quite ready for it, the demand not having begun, and no sales made worth mentioning. It is our aim to get 18c for best 1-pound sections, and 16c for 2-pounds. Extracted, as usual, is dull.

BEESWAX—30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections 17@18c; extracted, 7½c.

GEO. W. MEADE & CO., 213 Market St.

☞ The meeting of the Bee-Keepers' Association of Northeastern Kentucky, will be held in the city of Covington, Walker's Hall, on Aug. 13, 1884. G. W. CREE, *Sec.*

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

QUEENS!

BY RETURN MAIL,

FROM OUR NEW STRAINS OF

ITALIAN AND ALBINO BEES.

We are happy to announce to the bee-keeping public that we are now prepared to send you QUEENS on short notice, at the following low rates:

Untested, each	$ 1.00
" per ½ dozen	5.50
" per dozen	10.00
Warranted, each	1.10
" per ½ dozen	6.00
" per dozen	11.00
Tested, each	2.00
Select Tested, each	2.50

Send for our descriptive Price-List and see what our customers say of our goods.

Address, **WM. W. CARY & SON,**
COLERAIN, MASS.

(The oldest breeders of Italian Bees in America.)
2SAtf

For Rent. **My Apiary** of 100 colonies of Bees, including a house and one acre of land, shop, honey-house, etc. Also, Bees and Honey for Sale. For terms, address

H. S. BECKTELL, Three Oaks, Mich.
30A3t

Syrian-Albino Queens!

My new Strain **AHEAD** of all. They build beautiful, straight Combs, **without Separators,** and are **UNEXCELLED** as workers. Reared by Alley's method.

Select-Tested, to breed from	$3.00
Untested	$1.50

☞ By an error of the type, in last week's Journal, the latter figures were $1.00.—ED.

Address, **DR. G. L. TINKER,**
30Atf New Philadelphia, Ohio.

DR. FOOTE'S

HAND BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause &
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
ABtf **J. VANDERVORT,** Laceyville, Pa.

HELLO! HELLO!

We are now ready to Book Orders for

Bee-Keepers' Supplies.

WhitePoplar Dovetailed **SECTIONS** A Specialty.

Everything fully up with the times, and

At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.

APIARIAN SUPPLY CO.,

7A6m WILTON JUNCTION, IOWA.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

LOCAL REPORTERS WANTED.

We want an agent and local reporter in every farming community to represent City and Country and furnish us from time to time such facts as we may require. Send 25 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A18t

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,

Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**

976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

FDN.MILLS. 10 INCH $ 15.00
W.C.PELHAM.
MAYSVILLE, KY.

37A1y

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK C., Portland, Me. 4A1y

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ITALIAN QUEENS, DADANT FOUNdation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

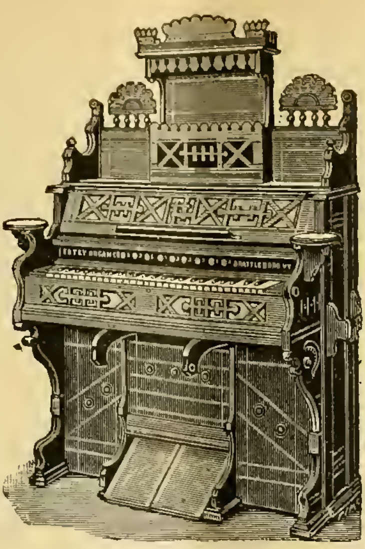
ITALIAN QUEENS

AND BEES.

Dollar Queens, 90c.; six, $5.00; twelve, $9.00. Warranted, $1.50; tested, $2.50; selected, 25 cents extra. Warranted pure. Order now and get choice Queens. Send money by P. O. Order, Registered Letter, or American Express.

27Atf **N. F. ASHTON, Davenport, Iowa.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.



BUY AN ESTEY ORGAN

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,

188 and 190 State St., CHICAGO.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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NEW AND USEFUL

Articles for the Apiary

Send for our 16-page illustrated Circular.
18Atf **HENRY ALLEY,** Wenham, Mass.

WE CALL

the attention of all wanting A No. 1 BEES, Italian, Cyprian or Hybrids, to the following, from one well-known to the readers of this Paper:

"I have never seen a case of foul brood; my bees are entirely healthy, and have always been so, and are O. K. in every respect."
GEO. B. PETERS, M. D.

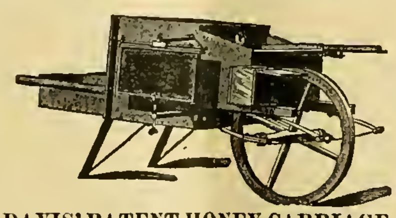
We can furnish any number of Colonies of the above Bees, and will warrant safe delivery and satisfaction.

N. B.—No Bees will be sold by us, for any consideration, from any apiary that has ever had a case of foul brood in it. For prices and particulars, send to

FLANAGAN & ILLINSKI,

Lock box 995, Belleville, St. Clair Co., Ills.
18A13t 6B3t

SYSTEMATIC AND CONVENIENT.



DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Price, complete, only............$18.00.

For Sale by
ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

IF YOU WANT

—A—

VEHICLE,

SEND A POSTAL CARD TO THE

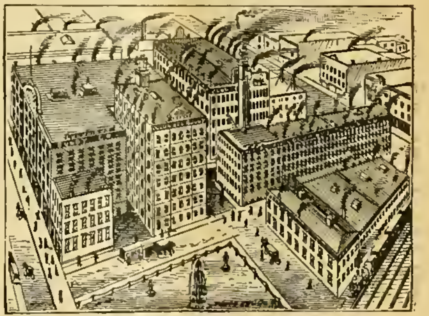
COLUMBUS BUGGY CO.

COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

---

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,

1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

1868. 1884.

HEDDON'S COLUMN.

BEST GIVEN COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices :

Tested, to breed from	$ 3 00
Untested	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition OF BEES and HONEY, OR THE Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

Appreciative Notices.

FRIEND NEWMAN:—I acknowledge with pleasure the receipt, this morning, of a very beautiful book, entitled, "Bees and Honey, or, Management of an apiary for Pleasure and Profit; sixth edition, enlarged." The book opens with a kind, familiar face, and the whole subject matter is concise, easy and comprehensive. I read it with much pleasure. T. F. BINGHAM.
Abronia, Mich., May 1, 1884.

I have received a copy of the revised edition of "Bees and Honey," and after examining the same, find it to be a very handy and useful book of reference on the subject of bees and honey, and believe it should be found in the library of all interested in the study of bees.
H. H. BROWN.
Light Street, Pa., May 8, 1884.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

THOMAS G. NEWMAN,
925 West Madison Street, Chicago, Ills.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

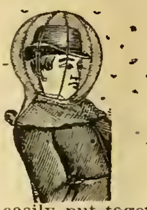
Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

50 TONS

OF COMB HONEY WANTED.

Believing it to be advantageous to both seller and buyer to deal with the same parties year after year, we have for several years bought the entire honey crop of many bee-keepers. In view of our increasing trade, we wish to add to our list of producers the names of a few more reliable men whose honey crop is from one to ten or more tons yearly. Through the actions of certain bee-keepers, the trade now demands mostly one-pound sections. We pay **spot cash** at railroad station for what we buy. Those desirous of becoming acquainted with such dealers, will state how much honey they have of each size section. How much of each quality. How soon the whole or part of it can be in shipping order. Name lowest cash price, and say how much more is in your locality. If answer is favorable, we will call on you. York State, Michigan, or Vermont preferred, Address,
F. I. SAGE & SON, Wethersfield, Conn.

A NEW BEE VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces.

Price, by Mail or Express, $1.00.

ALFRED H. NEWMAN,
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CHICAGO, - ILLINOIS.

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Italian—tested Queen	2.50
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Automatic Honey Extractor AND SMOKER.

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THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., August 6, 1884. VOL. XX.—No. 32.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1**.

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THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

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and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)......	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work.........	4 00 .	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing........	3 00..	2 75
Scribner's Lumber and Log Book....	2 35..	2 25
Fisher's Grain Tables................	2 40..	2 25
Moore's Universal Assistant.........	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees.........................	2 75..	2 50
King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year and		
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Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
British Bee Journal..................	3 75..	3 50
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Look at Your Wrapper-Label.

X SUBSCRIBERS whose papers reach them with this paragraph marked with a *blue* pencil, will please take notice that their *subscriptions will expire at the end of the present month.* Such are marked thus on the label, "Aug 84." We do not want to lose any of our subscribers, and give this notice so that all may get every number of the BEE JOURNAL without any break, and no papers will be missed. When the money for renewal is received at this office, the date on the label is changed to correspond, and this change is your receipt. If there is any mistake made, notify us at once.

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CHAS. H. GREEN, Berlin, Wis.,
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E. L. ARMSTRONG, Jerseyville, Ill.,
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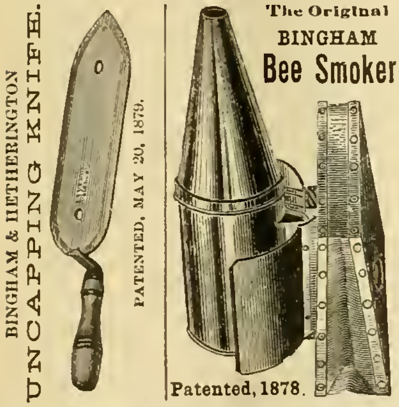

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With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

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The Apiary Register, by Thomas G. Newman.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00**; for 100 colonies, **$1.25**; for 200 colonies, **$1.50.**

Honey as Food and Medicine, by Thomas G. Newman.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by Thomas G. Newman.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society —Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50 cents.**

Why Eat Honey? by Thomas G. Newman.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25**; 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom. Less than 200 will have a blank where the name and address can be written.

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Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Progressive views on this important subject: suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by Thomas G. Newman. —Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by Thomas G. Newman. —In the **German** language. Price, in paper covers, **40 cents**, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. Root.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. Root.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25**; paper, **$1.**

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by Rev. L. L. Langstroth.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00**; in paper covers, **$1.50.**

Queen-Rearing, by Henry Alley.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. King.—A new edition, revised and enlarged. Price, **$1.00**, bound in cloth.

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Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

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The Hive I Use, by G. M. Doolittle.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. Kohnke.—Its origin and cure. Price, **25c.**

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Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the Bee Journal, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or $8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. Ward. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., AUGUST 6, 1884. No. 32.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The Honey Crop.

The honey crop of the present year is not up to the standard either in quantity or quality. In some localities the so-called "honey-dew" has been so abundant as even to kill the leaves of the trees where it was deposited, and, of course, the bees gathered it in large quantities, and deposited it in the hives, but it is unworthy of the name of honey, not being of the nature of that article at all. A communication by Prof. Cook, in last week's BEE JOURNAL, describes very minutely the insects that deposit it; and also gives the remedies for preserving the trees from injury.

But now comes a worse trouble, and it is of a two-fold nature—we refer to the uses to which this so-called "honey-dew" secretion is put, when gathered by the bees. To sell it for honey will be as damaging to the sale of pure honey as to put glucose upon the market and sell it for honey, and it should not be done under any circumstances. A one-pound section well-filled with this stuff was placed on our desk a few days ago, with the question, "What is it?" It neither has the *smell* nor *taste* of honey, and is the poorest kind of a substitute for it. To all, then, the BEE JOURNAL would say: "Do not undertake to sell it for honey; no matter what the amount may be which the bees have deposited in their surplus honey sections."

The other point of the "caution" which we would give, is this: If the fall crop of honey should be a poor one, the bees may have nothing upon which to subsist during the coming winter, except this secretion of the aphidæ, misnamed honey-dew, and the result of such a state of affairs may be very detrimental—spreading disease and death all around.

Should there be a bountiful honey crop this fall, it will be indeed "a God-send" to the poor bees—saving the lives of millions. Let us hope that it may be so, especially as the basswood has failed in many places, and the early harvest has been, generally, but a very slight one.

In case the fall-harvest is also a failure, there should be a close inspection of the contents of the hives, a general cleaning-out of the aphidæ secretion by the use of the extractor, and a systematic feeding of the bees with sugar-syrup, or good honey, for winter stores.

We give this word of warning thus early, so that no one may have an excuse for neglecting the matter until it is too late and thus entail a severe loss of bees during the next winter.

☞ We have received from Mr. C. B. SCHMIDT, Commissioner of Immigration, Topeka, Kansas, a copy of a little pamphlet published by him, which presents in very ingenious and striking form the facts about Kansas as an agricultural and stock-growing State. The statements made are illustrated by colored diagrams; comparisons are instituted between Kansas and other States, and different years of Kansas history are compared with each other to show the progress made.

☞ We have received the Premium List of the Upper Mississippi Inter-State Fair, to be held from Aug. 29 to Sept. 5, at Dubuque, Iowa; but it does not contain any premiums for bees and honey.

☞ The next meeting of the Bee-Keepers' Association of Boone and Hendricks counties will be held at H. Coxe's apiary, 1¼ miles east of Fayette, Boone County, Ind., on Saturday, Aug. 16, 1884. O. KNOWLTON.

Local Convention Directory.

1884. *Time and place of Meeting.*

Aug. 6 —Lorain Co., O., at Elyria, O.
O. J. Terrell, Sec., North Ridgeville, O.

Aug. 2.—Gibson Co., Tenn., at Trenton, Tenn.
T. J. Happell, Sec.

Aug. 13.—Northeastern Ky., at Covington, Ky.
G. W. Cree, Sec.

Aug. 16.—Decatur, at Greensburg, Ind.
Henry Carter.

Aug. 19.—N.W. Ill. & S.W. Wis. at L. Highbarger's.
J. Stewart, Sec., Rock City, Ill.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mic

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Grading, Crating & Shipping Honey.

In the *American Agriculturist* for August, we find the following very good hints on marketing honey:

The first grade should consist of only perfect, white combs, and it is the writer's opinion that, in many instances, there should be only this one grade of comb-honey. Some bee-keepers make a second grade of unfinished sections, but if the apiary is rightly managed, there will be but few of these at the close of the season, and it is better to extract the honey from them, and keep the combs until another season. Honey that is too dark for the first grade, should not, as a general thing, be stored in sections, as it is usually more profitable to extract it. Before crating, sections should be scraped clean of propolis. A small crate is preferable; it is more easily handled, and less liable to be "dumped," while it sometimes enables the retailer to sell a whole crate of honey at once. Sections should be placed only one tier high in shipping-crates; because if any combs of the upper tier become injured, the honey drips down and soils those of the lower tier. Some bee-keepers make a shallow "dish" of heavy manilla paper, and place it in the bottom of the crate, then if combs are injured, the "dish" catches the honey, and prevents the soiling of other crates. All honey-crates should have glass on at least one of the sides.

Reviewing the Situation.

Mrs. L. Harrison gives the following in the *Prairie Farmer* of last week:

Clover and linden bloom in this locality are now nearly over, and we are looking after the delinquents. The young queens, reared from cells taken from the best colonies, are laying, and if not built up into full colonies for the late harvest, will be introduced whenever a delinquent tax-payer is found. Sometimes a young queen is lost on her "bridal tour", and the bees have no eggs to rear another. In such hives, laying workers are found, and it is exceedingly difficult to introduce a queen there, as these aspiring mothers cannot be distinguished from the workers, and will destroy every queen that is put into their hive—there may be several of them. I have known them to let a virgin queen live, and destroy her when she returned from her flight. I have sometimes exchanged their frames for frames of brood, with another colony, and when the young bees emerged, they were not satisfied with laying workers, and protected the queen given them. The presence of these workers may be known by the brood in worker comb being all drone and in irregular order. The eggs of an unfecundated queen produce drones only, and the sooner she is supplanted the better.

During the interim between the early and the late flow, is a good time to utilize the odds and ends of unmarketable honey. At this season there has been in many localities a large amount of dark honey, the product of plant-lice. This can be fed during a scarcity, and the bees will rear young for the autumn harvest. It should be fed slowly so as to keep them breeding, and not enough for them to store it away. I feed weak colonies in the caps of their hives (so no bee can gain access to rob from the outside) the cappings from honey that is to be extracted, and all leakage and odds and ends of every sort, during wet days, when the bees cannot be in the fields.

The Marketing of Honey.

The Indiana *Farmer* gives the following timely hints on the above subject:

One might infer by the haste with which some of our friends rush into the market with their honey that it was a perishable article, or that it was a matter of life or death that their honey should be disposed of at once. Many again have an idea that by getting in a little ahead of their neighbor they will secure better prices and quicker sales. While the facts in the case are directly the reverse. But very little honey is consumed until the cool weather comes. Customers will buy a taste of new honey and there they stop, and are satisfied until the berry, fruit and vegetable crops are out of the way. Then we may expect a good sale for our honey.

For the most satisfactory results in disposing of our honey crop, the home market should first be taken into consideration. especially when the crop to be disposed of is not very large. Honey, like all other commodities, loses in the price to the producer, the the farther from home it goes to find a consumer. Large crops, of course, must seek large markets. At present we are considering only those who have a few hundred pounds to dispose of. There is scarcely a family in the land but can be induced to purchase a few pounds of honey, if offered to them in the right manner.

Our people are large consumers of sweets. The adulteration of syrups has been carried to such an extent that they have become disgusted and nauseated with them, and are in search of something to fill the want, and now is the time for bee-keepers to take action and offer to the people the products of our apiaries. Pure honey is about the only pure sweet now obtainable. As to just what shape in which the honey shall be offered depends entirely on the kind of trade you wish to supply. To home-consumers, extracted honey in fruit jars, tin buckets or cans holding from three to thirty pounds, seem to give best satisfaction, but for fancy grocers' trade, the one-half pound, one and two-pound glass jars suit the best. Each package, let it be what it may, should bear the producer's name. People of to-day rely much more on brands and producers' names than many suppose, or than was formerly the case, when adulteration was so little practiced.

Comb honey is marketable only in sections, the one-pounds finding preference in our larger markets. These should be packed in neat shipping-cases, holding about 20 pounds each, as such find quicker sales and are less liable to be damaged in handling.

Melting out Beeswax.

A lady correspondent in the *Pacific Rural Press* gives her experience in melting out beeswax, as follows:

I will not say who of our family can make the most muss while melting out wax, but even the worst one can not make much muss in my way of melting; but by the boiling-out process there is too much chance for it. I have tried both ways, and know of what I say. I take the pieces of comb and press them together in as small a compass as possible, without too much trouble; then put it into the large dripper that fills the oven, or into two small ones if preferred. Make a good fire and put the pans in the oven; in a very short time it will be all melted. Then have a dish ready, also a hoop covered with house-lining, and pour the melted comb into the dish through the cloth. Then fill up the pan, set it back into the oven, and take the impromtu strainer, from which all the wax will have dropped by this time. and empty the refuse into the stove to make fire for melting out more wax. The wax, in that way, is pure and clean, and much whiter than when boiled, because the water takes out the dirt and coloring-matter in the comb and mixes it with the wax; and in this way I can do it much faster and with much less wood, which is quite an item in some places. Try it and see if it is not the best way.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 4, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—The demand for extracted is fair, and to all appearances, gradually improving. It brings 6@9c per pound on arrival. There is a small demand for comb honey, but we had small offers only, and a good deal could be sold. It brings 14c per pound on arrival.

BEESWAX—Offerings plentiful at 30@32c on arrival. C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—Sales of comb honey continue slow. As yet there are no arrivals of this season's crop. We have received several small shipments of new extracted honey, which sold readily. For prices on this year's crop, we quote: Fancy white, 1-lb., 16@18c; fancy white, 2-lb., 15@16c; fair to good, 1 and 2-lb., 12@14c; fancy buckwheat, 1-lb., 12@13c; 2-lb., 11@12c. Extracted, white clover, in kegs or small barrels, 8½@9c; dark grades, 7@7½c.

BEESWAX—Prime yellow, 30@32c.

McCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in, and selling at 16@18c. for best white 1 and 2-pound sections. New extacted, 8@9c. Honey in unglassed sections sells the most readily. Old comb honey all gone.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—This week we have had liberal receipts of comb honey, and the prices are irregular. As a rule, the honey is of first quality, and put up in good shape; a gradual improvement is noted in this respect. Prices range from 14@16c for the best; occasionally a case sells for more than that, but it is in a retail way. The extracted honey is still sluggish, at nominal prices—6@8c per pound.

BEESWAX—Fair receipts; prices, 30@37c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Receipts are increasing. There is no improvement to note in the inquiry. Buyers are few and bids low. There is not a single transfer of a wholesale character to report. Strictly choice extracted was offered at 5¼c. Comb from the San Joaquin, and of choice quality for that section, sold for 12c. Stocks are distributed in so many hands that sellers are placed to much greater disadvantage than if offerings were more concentrated. White to extra white comb, 12@15c; dark to good, 10@12c; extracted, choice to extra white, 5@6; dark and candied, 4c.

BEESWAX—Wholesale, 25c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—Choice new 2-lb. sections are now bringing 17@18c, and 1-lb. 18@19c, ½-lb. 19@20c. Extracted in fair demand at 7@8c; extra choice would bring 9c in barrels. No other packages wanted in this market.

BEESWAX—Nominal, 30@35c.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—There are some arrivals of new-honey which is very nice, unusually so. Our market does not seem to be quite ready for it, the demand not having begun, and no sales made worth mentioning. It is our aim to get 18c for best 1-pound sections, and 16c for 2-pounds. Extracted, as usual, is dull.

BEESWAX—30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15@16c; extracted, 7@7½c.

GEO. W. MEADE & CO., 213 Market St.

CORRESPONDENCE

For the American Bee Journal

The Pollen Theory Again.

JAMES HEDDON.

It seems that some of our honey-producers are agreeing with me regarding the above theory. It also seems that some of them, who believe that there is much honor in priority of discovery, propose to take unto themselves priority regarding the "pollen theory." Some of our Professors take less kindly to the above theory than do practical honey-producers.

One producer has lately claimed priority because I have been more modest than himself and others in asserting that I "knew, and had the whole problem in a nut-shell." I have *believed* the theory. I said so at an early date to draw out this friendly discussion and get at facts. I thought that I might be wrong, and so I felt my way carefully, and I am still doing so with an increasing show of evidence pointing to the truth of the theory.

For this care and conservatism, Mr. Fradenburg proposes to relieve me of any honor which might, and as he believes, *will* grow out of my discoveries.

Dr. Tinker seems to be edging over toward the theory, getting upon one plank at a time, but using great energy to push me off from each plank as he gets on. He appears to desire my wintering theories, in part, but not my company in their enjoyment.

I will, for the sake of self-defense, reply to the Doctor in part and parcel, and trust that this reply will also do for my literary friends whose attacks appear in the same issue. Not only "Prof. Cook," but others (myself among them) have made several experiments with sugar syrup vs. honey as winter stores. I made one experiment with 16 colonies during the winter of 1871 and 1872, I think it was, but perhaps it was 1872 and 1873; another about 3 years later, another 2 years ago, and again the one of the report in question.

Like the Professor and others, I found and declared effects in favor of the cane sugar. I found that the judgment of man knew better than their own instincts what was best for bees. I find that if a choice between sugar syrup and poor honey is left to their instincts to decide upon, that they will be "silly" enough to choose the worst food. I find that they are sometimes nearly as "silly," and need the intelligence of man to protect them in regard to a choice between honey and bee-bread as a winter diet.

Now, in regard to "causes," I do call cold no less than one of the great "auxiliary causes," and in this all will agree. I do *not* give it the place of "primary cause," because I find that bee-diarrhœa rages in mild climates and in cellars where the temperature never is lower than 40° Fahr. above zero. I also find that bees do winter successfully where a severe cold is brought against them. The same line of facts forces the reasoner to shut out "confinement" as a primary cause; it too, being only an auxiliary cause. Now, it would be very "interesting" to me to know why I have made any error in the classification of cold and confinement as auxiliary, and *not* primary causes.

The Doctor tells us that our Southern friends look upon our cold as the primary cause of the disease. Well, they have it, and suffer from the disease in Missouri. There they do not look upon cold as the cause, or yet Doolittle's "confinement." Perhaps a few of the less literary Southern friends who have not suffered in their immediate vicinity, may ascribe the lower temperature of our Northern climate as the cause; but such are only making the same mistake that some of our people do, in thinking that the heat of the South is the primary cause of yellow fever.

The Doctor tells us that some of our able observers have proven that "restlessness," "excitement," and "undue activity" are symptoms of the disease. Yes, they are symptoms, and effects only, in nearly all cases; but sometimes may act as auxiliary causes, in a lesser degree. I supposed that not only the "abler" but the less "able" apiarist had found that out. The Doctor further tells us that those colonies which remain quietly clustered upon the combs, usually have no disease. That is true; but I put it this way: those colonies which do not get over-loaded with feces, remain quiet and have no disease. Agitation and excitement, I think, do sometimes act as an auxiliary cause, but not a primary cause. And why? because I have witnessed and cited the readers many instances when an intense agitation and excitement failed to produce any signs of the disease. Take the case of Mr. Milliner, of Big Rapids, when he put his bees into the cellar in the rattle-te-jam, closed entrance method, which I have heretofore given; also my own experience with the bees brought from the country in mid-winter. Now, Doctor, do not say that pollen is not a primary cause, because bees do not have diarrhœa in summer; because they get the *disease* only by an aggregated loading of the intestines, which cannot take place when they fly and void daily. They will have it, and in less time than in winter, if *confined*.

A man lost his life. He was killed by a lion. No such death could have occurred had it not been for the mother of this lion. However, the old lioness is not called the primary cause of the death. "Yellow Jack" cannot exist after a frost, but heat is not its cause, only a necessary condition to the development of that primary cause, michrocoxi. I hope that I am now clearly understood, and shall never have to go over this ground again.

The Doctor hints that restlessness causes the demand for nitrogenous food, and the residue from this food, and worn-out tissue, constitute the excrement which we find in cases of bee-diarrhœa. Now, I believe that there is plenty to cause the disease, resulting from the pollen alone. I further believe that there is not enough resulting from effete tissue to do any harm whatever. I will call your attention to the fact that Prof. Cook, or his assistant, found the solid matter of diarrhœa excreta, examined by them, almost wholly pollen, and distinguished it so plainly with the microscope, that they could determine the flowers from which some of it was gathered.

Now I come to an assertion which I am not prepared to accept or reject. I have had no evidence either way. I have never met a gentleman who claimed to have had any.—It is this: That bees can and do eat pollen all winter long, and yet winter well. Some way or other, I do not remember of ever reading any thing corroborating this assertion, the source and style of which,settled itself upon my mind as any evidence. If "pollen husks" (whatever they may be) are found in the intestines of bees that have wintered well, I should next want to get to an agreement of what condition is meant by "well." Bees may be wintered safely, *i. e.*, so as to save the individuality of the colony, and not to be wintered as "well" as I wish and as I wintered the 45 colonies referred to in my report.

The Doctor says that "no trouble comes from slight accumulations;" this I agree to. He further says: "It is only when, as in such a winter as that of 1880-81, that bees are obliged to consume inordinate and almost unprecedented quantities of both honey and pollen to keep life in them, that these harmful accumulations arise." Right here is one more of the Doctor's fatal errors.

I told you that I put colonies with plenty of as good, sweet honey and pollen as one could wish, and in a cellar whose temperature never was below 42°, nor above 45° or 47° (as I recollect it); and that they began dying with diarrhœa in its worst form in less than three weeks after confinement; and that before two-thirds of the confinement (at other times successful) was passed, nearly every one of that whole apiary was dead. You also know that in Kentucky, some 16 years ago, without any such conditions regarding cold or confinement as those present in the North during the winter of "1880-81," the bee-keepers were all panic-stricken with the fatality caused by the disease in question. Now the Doctor tells us that "if restlessness then causes the bees to eat too freely of pollenized food, it ranks as a prior cause; and the most that could be held is, that the latter may be an auxiliary cause, while restlessness, as the effect of cold, humidity and confinement, one or all, must stand as the primary cause or causes amenable to the hand of man. I am, therefore, unable to see the propriety of excluding the bee-bread from the bees in winter, but think that we should provide against the primary causes; and I shall hold that the latter policy may be more economically executed than the former, and that it is practicable, effectual in results, and consistent in theory." Right here we differ again, and in more ways than one. Whatever may be the most practical method of avoiding the disastrous results. I believe that bee-keepers will bear me out in asserting that to pollen is properly attached the term " primary cause." The disease is intestinal inflamation. The inflamation was produced by the irritation of pollen residue coming in actual contact with the diseased parts.

But we also differ regarding the most efficient method of prevention. according to our present light in the matter. It is preposterous to make the claim that any repository, system or ventilation, out-door packing, absorbant, or anything of the kind, can be relied upon as a prevention of the disease. The sad experience of hundreds of bee-keepers not only proves to them, but likewise to every thoughtful bee-keeper, that there is no certainty of success through any of the conditions mentioned by the Doctor.

Whenever we know just what is the cause of this premature consumption of pollen, it may or may not turn out that we can remove that auxiliary cause more easily than the primary cause—pollen; but at present I have this advantage: If we agree that consumption of pollen produces the inflamation, we do not agree to any cause of said consumption.

For two years past we have been experimenting in regard to the prevention of bees storing their combs with pollen in the fall, and we now think it clear that cheap, off-hand practical methods can readily be adopted to avoid such storing. I do not doubt, and have so stated to my students, that we may so arrange auxiliary conditions that a moderate amount of bee-bread may remain in the hive without danger of any winter consumption; for we know that nature sometimes so arranges it.

I have for some time been of the opinion that the more honey the combs contain, and what is better, the more heavily they are filled with sugar syrup. the least apt the bees will be to consume any bee-bread.

Now, allow me to digress long enough to say that, in this locality bees gather at least ⅓ more pollen than they ever consume. They place large quantities of it in brood-comb during the autumn. When new pollen comes in the following spring, the bees cut and carry out great quantities of that old bee-bread, much preferring the new, and needing the room it occupies, for brood, etc.

The Doctor's and Mr. Clarke's catch-quibble regarding the combfull of bee-bread, savors of being hard pressed for argument. Did you ever see a comb full of brood ? and would it all have to be capped, or ready to cap to warrant that name ? Did you ever see a comb full of eggs ? I have heard men say they had. I did not suppose they meant that the cells were even full, only the comb was fully occupied. The comb of pollen in question contained very many cells of bee-bread not full, but occupied with it. In the spring it also contained many cells occupied with it—nearly as many as in the fall; but the pollen eaten down in many of them. Does it not seem strange that out of 45 sugar-fed colonies this one, and this one only, should show any signs of diarrhœa? I do not think such would usually be the case, but the late brood threw the cluster upon this comb.

Mr. Clarke makes the point that a majority of my bees having natural stores, came through also. I told you in my report two facts which answer that: First, owing to certain manipulation. we reduced the bee-bread more than one-half, we think; secondly, we further told you that the workers of every undiseased colony, which we examined, except the 45 in question, had distended bodies; while those of the 44 gave no appearance of such distention. Mr. Clarke's question was answered before he asked it, it seems to me.

The Doctor tells us that away up North, bee-keepers winter their bees with almost no loss at all; that wintering is no trick for them; that bee-bread in their hives in winter gives them no concern; and that they seldom have a case of bee-diarrhœa. How does this statement of the Doctor's accord with his cold, confinement, restlessness, consistent theory? The cold and confinement is far greater there than here. and in Southern Indiana and Kentucky. Fall weeds for pollen are not one-tenth part as profuse as here and farther South. The Doctor says that if I can give any practical method of reducing or excluding bee-bread from the hives in winter, it will offer us no advantages not already possessed. I fail to see where he gives us any evidence of the truthfulness of that statement. I expect to prove it false in the future.

Dr. Mason, of Wagon Works, O., says that he has proved it false for several winters. Many others say the same thing. I have re-read Mr. Wilber's communication on page 171 of the BEE JOURNAL for 1881, and studied it carefully, and see nothing inconsistent with my theory and practice. The Doctor does not offer us any reason why sugar syrup is any better than honey as a winter food. I have done so. I have told you that consistent with my pollen theory, sugar excels honey, because of its freedom from floating pollen nitrogenous substance, and its superior heat-producing qualities. Then the Doctor wonders who will say that had we had such a winter as in 1881, I would not have lost half of the 45 sugar-fed colonies. Well, I will say so, and I think that ¾ or more of the readers will say so.

We know that bee-diarrhœa is our only fear. We laugh at all winters, not going hand in hand with bee-diarrhœa, that we have never lost a colony that did not have the disease, or died of starvation. Restlessness is no primary cause here. In the Doctor's thirteenth paragraph let us chronicle that he believes that some pollen is essential to the welfare of bees in winter.

Mr. A. I. Root says that his experience and aggregated reports teach him that bees are safer without pollen in the hive during confinement. I agree that bee-bread is very valuable for certain purposes when needed; even worth more than $1 per pound; but it is like fire, a splendid servant, but an infernal master.

The Doctor's remarks about bees suffering in the spring for want of pollen, only shows that he is attacking what he does not understand. There is no danger from that, as we will explain in the future, as we have already gone too far now.

Regarding Mr. Clarke's new theory of wintering, I have to say that none of his essential claims have ever been presented to my practice as truth. I think he will soon have such a buzzing about his hibernation theory, that he will have no time to apply any of his literary vigor to the pollen question.

Dowagiac, Mich., July 24, 1884.

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For the American Bee Journal.

How to Make Honey-Vinegar.

DR. L. C. WHITING.

All substances which contain sweets, or any substance capable of being converted into alcohol, can be made into vinegar. The old and slow method of producing acid-fermentation has been abandoned by the professional vinegar-maker, for a quicker process. On visiting a vinegar factory you will see a number of very tall, slim tubs; the bottom of which is made tight with a good head. A foot or so above this is a false bottom bored full of small holes, and the sides of the tub above this is bored full of holes which slant downward and inward, so that any drip will run in instead of out. The inside of the cask is filled with coarse shavings of beechwood, and the top is open. These chips are saturated with the best cider vinegar that can be had, and left to stand a few days to become well soaked and soured.

Old, hard cider, or sweetened water that has fermented, will become good vinegar by dripping slowly through these chips once or twice. Even sweetened water without fermentation will become vinegar; but if much is used at one time, the chips lose their acidity, and you have to sour them as at first, before you can do good work.

Whisky and water makes the best vinegar we have, and you can make from six to ten barrels per day, by passing it through this tub of chips. The room must be kept warm.

This process is not necessary in making honey-vinegar, except on a large scale, which would not be profitable on account of the price of honey; and it shows the importance of souring the cask, and having plenty of fresh air in contact.

Drawing from one cask to another in such a way as to expose it to the air, facilitates the change in proportion to the exposure. The strength of the vinegar depends upon the amount of sweet or alcohol you can work into it. If too sweet, it will not sour. The mother in vinegar is not only useless, but a detriment. One gallon of good vinegar will do more good than half a barrel of mother. Honey-vinegar, when fully ripened by age, loses all taste of the honey.

East Saginaw, Mich.

For the American Bee Journal.

Large Yields of Honey.

W. H. STEWART.

In a recent article I referred to extraordinary reports of honey yields; and I will now state that I do not think that Mr. Pond has hit upon the true reason why a few colonies in an apiary give much more than an average yield of surplus honey.

It is very true that there may be circumstances that will, for a time, call most of the bees of the same colony off in the same direction. This is manifest in hunting bees. When we get one bee to carry home a load of honey, she will, on her return, be accompanied by others belonging to the same colony; and if the bait be allowed to remain at the same spot, the number of bees working on it will multiply at a rapid rate, and it is quite probable that in a short time nearly all, or perhaps the entire working force of the colony would work on the same spot.

Again, a colony of robbers having subdued a neighboring colony, would soon be out in full force to carry home the booty. There may be other circumstances that would induce an entire colony to work in the same direction from home, but where there is no inducement, there are not many bees to be found. I have kept bees in several different States, and have often watched them as they started out and returned home; and when the flow of honey has been nearly equal in all directions, I have noticed that the bees of the same colony work in all directions about the same.

Where I am now located, there are swamp lands south and west of me; and in early spring all the bees work in those directions. Later, when they work on white clover, they go east, north and west, as there is no clover within working distance of my bees on the south. What basswood they find is northwest, and nearly all go together in that direction during basswood bloom. About a week after basswood bloom is past, there opens a species of horse-mint or burgamont, which grows on the sandy plains south of me, on the other side of the Wisconsin river; and when the weather is such that it yields honey, nearly all of the bees seem to work in that direction. As they start out, they rise quite high in the air, and as I stand on the high river bank, or if I am on an island in the river, I can hear the very heavy buzz of the bees going and returning over the river. This proves that all colonies work in the same direction when the honey yield is in one direction; but if the clover, basswood, buckwheat, mint, and other honey-yielding plants which in order, were equally distributed in all directions, then I am well satisfied that bees of the same colony would work about alike in all directions during each successive bloom.

We often notice that when bees start out in the morning, they fly around in the air, all the while enlarging their circle of flight, and it is probable that in so doing, they catch the sweet aroma of distant bloom as it is borne along on the wind, and that they search the location of that aroma until they are at the bloom from which it came. This being the case, the bees of the same colony would be apt to work in different directions, as the wind changed, provided that the blooming plants were found in different directions.

I think my experience during the season of 1883, will give some important light on the question under consideration. I may, perhaps, be considered a little wild when I state that I am well satisfied that those colonies which give such very large yields, are the most unprofitable colonies that we have; and when we find one producing much more than an average yield, we had better look well to their movements, and put a stop to their mischief as soon as possible.

In the spring of 1883, I managed to equalize my colonies as nearly as possible, and at the beginning of white clover bloom, they were about equally strong in numbers; all had plenty of combs, and all seemed to promise similar results; but when I began to extract the honey, I found that some produced double or three times as much surplus as others; and as this had been the order of things in by-gone years, it excited in me no particular suspicion until late in October.

I had been managing my bees through the summer, on Geo. Grimm's plan, *i. e.*, by saving through the season two or three full combs of early white honey to give the bees for winter stores. About the last week in September, I examined all the colonies, and gave each a good supply of heavy combs of well-cured and capped honey, and thought that I had all in good condition for the coming winter.

You can imagine my surprise, when on Oct. 20, I had occasion to examine a colony. I found those combs which I had given them a month before, were perfectly empty; and that the other combs in the hive were poor, and I had to feed them again. I then examined all the other colonies, and found it the rule: that those which had given the least surplus through the summer, were robbed of the winter stores that I had given them in September; and those which had given larger yields had all of their large frames of honey just as I had hung them in the hive in September; and not only so, but they had a large amount of fresh honey in their other combs, and were just capping it over.

It will be remembered that early frost had cut off the honey flow in this vicinity before I fed my bees in September, and thus those colonies which had increased their stores, could not have gathered the honey from the field; but it is clear to me that they had been borrowing of their more honest neighbors, until the one had double the stores that they needed, while the others were poor.

Be it understood that during all this time, there had been no visible signs of robbing in the apiary (I watch closely during the spring and fall months for robbers); but the mischief had been done so adroitly and noiselessly that I suspected that nothing was wrong.

It is my opinion that this work is commenced in the spring; and when a colony gains access to a neighboring hive, the two colonies soon become so well acquainted that the robbers are allowed to pass in and out at pleasure, and that they thus obtain those large yields; while those that produce the small yields have been busy in the field, and have gathered for us far more honey than have those which gave the large yields.

Orion, Wis.

For the American Bee Journal.

Comments on Many Subjects.

DWIGHT FURNESS.

There is hardly a number of the BEE JOURNAL, so far, but what has contained valuable and practical articles which I have indexed in my reference book, for future use. The article on "Direct Introduction of Queens," by S. Simmins, on page 456 is, I believe, "sound doctrine," and well worth the price of the BEE JOURNAL for the year. I first got the idea from the writings of Messrs. Doolittle and Heddon, and have used it to a limited extent, but always successfully.

My experience in introducing queens, during the past two seasons, has led me to believe in the theory, that in ninety-nine cases in a hundred, where a queen is not accepted, she is herself the cause of the failure. In support of this theory, I have used Mr. H. L. Jeffrey's method of introducing, with uniformly good results.

I have a few nuclei colonies which take 4 frames ½-Langstroth size, and when short of queens or cells, I frequently change a queen from one colony to another, every 3 or 4 days, always taking a frame of comb and bees with her. In this way one queen can be made to keep a good many nuclei strong and full of brood. I once got rid of a fertile worker in this way.

I can heartily endorse W. Z. Hutchinson's article on "Hiving Swarms of Bees;" but do not like his clothes-basket arrangement. I use a common box made of light wood, fastened to the end of a long pole, and seldom need to climb ladders or cut off branches. A neighboring bee-keeper, whose apiary is surrounded by a lot of tall and slender oak trees, gave me his method of capturing swarms, which I have used a good deal. It is as follows: Fasten a common dry-goods box to the end of a long pole, and as soon as a swarm issues, go to the more convenient hive (an extracting super is best), take out a frame and shake the bees from it into the box. These bees at once set up a loud humming, and if the box is now held up in the midst of the flying swarm, they accept the call to cluster, enter the box without delay, and can be hived immediately; or if another swarm issues, set them aside and cover them with a sheet.

My apiary is situated in a grove of fruit and evergreen trees on a hill-side, with some tall forest trees just below it, and swarms generally fly pretty high. If they start to cluster in an inconvenient place, I drive them away with the fountain pump, until they choose a place that suits me also. As soon as the cluster is partly formed, shake it into the box, by means of a long-hooked pole, and when nearly all have entered, carry them to the hive prepared for them. Have a piece of burlap tacked to a couple of laths, *a la* Hasty, down in front of the hive to shake them on; lower the box carefully and lightly, jar off a few bees close to the entrance, and when they have "sounded the call," shake down the rest of them in a long, broad stream. If properly done, they will not fly up again; but if they do, the box will catch them. Heddon's plan of preventing after-swarms, works like a charm with me, and is very easily executed.

I am convinced that it pays me to use full sheets of wired foundation, and have yet to hear of a bee-keeper going back to anything else, after a thorough trial of the wired frames. I once bought some colonies which were hived on full sheets of foundation without the wires, and the cells near the top-bar were stretched so much that they were used for drone brood. Drones bred in them were weak and dwarfed, and were dragged from the hives by the hundreds as soon as hatched. Another bee-keeper here has noticed the same thing.

I have also used Doolittle's plan of hiving on starters, with a division-board in the middle of the hive, with good results; although some colonies will persist in building drone-comb whether they have much worker-comb or not. With a large apiary it requires too much manipulation to be practical.

During a good honey flow, I prefer to hive swarms on 4 or 5 frames of foundation, and put on the boxes at once. (Put on partly filled boxes for a day or two to prevent the queen from using them.) Add more frames of foundation as fast as the queen needs them. This year, when put in a hive full of empty combs or frames of wired foundation, the bees nearly filled 3 or 4 of the combs with honey before the queen had time to lay in them, and thus crowded out another swarm within 10 or 15 days. Plenty of surplus was soon given them, and they did good work in the sections at the same time.

Some of my colonies are confined to 7 frames in winter and summer, and I get fully as good results from them as from the 8-frame colonies. Seven frames solid with brood are all that an average queen can manage, and will produce enough bees.

Upon visiting an apiarist in this county, I found him by the kitchen stove fastening foundation-starters in flat, top-bar frames, and this is the way he did it: The frame was placed on a lap-board, top-bar down, the foundation put in place, and a piece of board, notched out at the ends so as to come exactly to the centre of the top-bar, was laid on the foundation. Then taking a putty knife, he held it for a moment in the steam of a tea-kettle's nose, and then with a quick, strong stroke, pressed the projecting edge of the foundation to the top-bar. Quicker and better work I have never seen done, and now I use the steam-heated knife for my wired frames also.

I should judge from an editorial in the *Kansas Bee-Keeper*, that Mr. Pond has already "reversed" his opinion in regard to reversible frames, as given on page 439 of the BEE JOURNAL. His next reversing will be, no doubt, in regard to "Italians vs. bees for business."

Furnessville, Ind., July 19, 1884.

For the American Bee Journal.

Bee-Diarrhœa.

C. W. DAYTON.

If we cause a colony to cluster the right distance (which is governed by the outside temperature) below the covering of the brood-chamber, moisture will accumulate over the cluster, in drops which will do no harm until they attain sufficient size to drop or run into or near the cluster.

This done, the first bee with which the drops of moisture come in contact, will take up a load with the intention of carrying it out of the hive at the first opportunity. The more moisture, the more loaded bees to become chilly and go back into the cluster to await a higher temperature; and as day after day wears away, with no chance to get out, all the bees become loaded with cold water which can cause indigestion, thus resulting in an overloading of the intestines with undigested food and water, and inflamation of the bowels may ensue.

I have seen healthy bees in mid-winter walk out to the edges of the combs, sip water, and go back distended, and in 15 days only the distended ones began to die of diarrhœa.

By re-adjusting the packing over the colonies when first affected, to avoid moisture, I find that the noisy ones will mostly go to the cellar-bottom in 25 days, and the remainder of the colony will come out healthy after 100 days more of confinement. I have regulated the temperature and covered the brood-chambers of normal colonies with a material which produced diarrhœa in 10 days, the removal of which was prevention, and its re-adjustment brought additional disease.

When the moisture accumulated at the side, or in the corners of the hive, I have seen no signs of disease until a disturbance, shift of the cluster, or a rise in temperature set the bees to taking up the moisture. So long as the inside of the hive remained dry, I have been unable to produce diarrhœa by shifting the cluster, changing temperature, reasonable but frequent disturbances, or brood-rearing.

In wintering 60 colonies, a large share of whose hives were dripping wet inside, in February, there was but one whose combs showed mold in the spring, and that was the only one where the bottom-board was left on the hive, and the entrance contracted. I have frequently noticed signs of diarrhœa at such times as is described on page 639 of the BEE JOURNAL for 1883; yet never unless the temperature had been such as to cause the condensation of moisture inside the hive, and followed by a day somewhat warmer, but not enough to allow the bees a flight.

Bradford, Iowa.

For the American Bee Journal.

Breeding and Selling Queens.

E. P. CHURCHILL.

Since the new races of bees (aside from Italians) have spread over the country, and since queens are bought and sold by thousands of bee-keepers, how are we to know when we get what we pay for? I bought 2 early, untested queens through a reliable breeder, here in Maine, who had a number from the South at the same time, and from parties who advertise largely, and are considered honest, and who claim to have all pure stock.

One of these queens proved to be a hybrid, and about as soon as she commenced laying she died; perhaps from old age, for all the others (about a dozen) proved to be the same. Is it not strange that such a number should all prove impure? Now for the result of the other queen which was bought from another party. I have tried reversible frames, and like them; but reversible bees I do not like. When I smoke them, do they not reverse? Take up a frame as carefully as you can, and you may deliberately get stung on the hand or face. These bees are well marked, 3 banded, and look, at first, like pure Italians. Suppose that I should breed queens from this queen, and scatter them over the country, would it not tend to spoil the kind disposition of the pure Italians? No person can sit close to this colony without noticing that they are reversible (and yet they use the same end every time).

Again, I have a select-tested queen from a breeder here, whose bees have not yet stung any one; and I have brushed bees from combs, and extracted the honey, and that too without a particle of smoke. These bees and queen are what I consider perfect.

I bought a queen from an Ohio queen-breeder, last season, which pleases me very much in all respects. A horse can feed close to the hive, or a person may stand by the hive all day, and when we handle the frames, the bees are there, and not in your face.

I believe that the matter of queens demands the greatest care; *i. e.*, if we wish to know what we are getting. If I buy a hybrid, I want to be told so, or at least I want that impression. I believe as Mr. Root says, that "the one who sells the best is the one who will win." It is a great disappointment, after waiting to test a queen in a full colony, to find that the bees are no improvement over those from the superseded queen, and that we must try again.

I am more in favor of pure Italians, since I see their kind disposition; and I almost think that it is best to buy tested queens, if I can get them where other bloods have not been mixed with them. I would be pleased to hear from others on this subject.

In regard to reversible frames, I have reversed all which were not full at the bottom, but which are now, and such a full set of brood I never saw; so much so that the bees have hardly any honey-cells, and must take the supers.

North Auburn, Maine.

For the American Bee Journal.

Priority of Location.

R. J. KENDALL.

Mr. Pond is a curious man—and his arguments on the above question are curious too. He either cannot or will not see; and which one it is, I am at a loss to understand. The history of this discussion is brief: Mr. Heddon wrote an article in which he showed how a practical apiarist *could* control a honey-field; how it could be done, and how an intruder could be driven out. Mr. Pond wrote an article in which he argued against the rightfulness of it (not against its possibility), and said Mr. Heddon was "selfish," etc.; in fact, his article was directed at Mr. Heddon and his motives. With Mr. Pond it was not right to do as Mr. Heddon proposed. He did not argue against his power or his legal right. Mr. Heddon replied, and so disposed of the morality, the rightfulness of the question, that Mr. Pond immediately shifted his ground and argued that a man had *a legal right* to come into another man's location.

I saw the injustice Mr. Pond was doing Mr. Heddon, and chipped into the discussion, saying that we were arguing first the moral right of the first locator to keep out intruders if he could; and secondly, his power to do so, and I said that no one doubted that an intruder had a legal right (and in that sense Mr. Pond was "legally right," and in that sense only) to enter another man's location, but he had no moral right, and that even looking upon this as a question of law, that the principles of law were against Mr. Pond, and I gave illustrations. Mr. Pond, in his reply, tries to ridicule me as he did Mr. Heddon, and asks with an air of exultation, if he is legally right, how can the principle of law be against him? I can tell Mr. Pond very easily the how, but before doing so, I would point out how in his manner of asking that question he changes the sense, and makes it bear an entirely different look to the position and point we are discussing. His "legal right" he puts in the sense of being according to the principles of law, whereas he is only "legally right" in the sense that I doubt whether any court would issue an injunction to keep the intruder out; but I apprehend that the court would soon be convinced (as Mr. Pond himself was, and showed that he was, by changing his position) that the intruder, by intruding, did the settler an injury, and consequently did a moral wrong, so far as bees went, and that being so, an equity decision might be rendered, as a precedent, for as yet such a question has not been passed on by any court that I ever heard of. Legal principles are based on equity, they are equity.

The equity of the matter Mr. Pond has accepted by his silently accepting and not answering the equity argument. He only now contends for the legality, inasmuch as that the settler cannot legally sue out an injunction and prevent an intruder putting bees in his locality. Cannot Mr. Pond see the difference, the wide difference? and that he is "legally right" in the sense of present special enactments, yet that the *principles* of law go dead against him? One of the principles of equity is, I think, that "where there is a wrong there is a remedy." In the case we are discussing, the remedy would be an injunction preventing the intruder coming into the settler's field.

Mr. Pond then goes on to discuss the foundations of titles and tenures. He says, and says as a lawyer, "The principles of law, as I understand them, *require* 20 years of adverse, uninterrupted and exclusive use to get tenure of my estate in fee." Now we all know that while that is true in certain cases, it is not true in all cases, and that it is false in millions of cases. I can get an absolute title in a few minutes, a title as absolute as Mr. Pond's 20 years, and Mr. Pond knows, or should know this; but there are other ways of getting title as I told Mr. Pond, and discovery and first settlement are two of the very strongest titles. This idea was carried out by every one of the discoverers of past days, and recognized by other nations, and is to-day. The idea is recognized by pre-emption, and it is recognized by the cattle and sheep men, and by miners in the West by first entry, and priority of location. Nobody is foolish enough, no one has contended that a man can get a title to *land* by letting his bees graze the flowers on it for 20 years. This is one of the ways Mr. Pond tries to put his opponent into a position he never put up. I do not forget anything about bees being in *feræ naturæ*, and never raised that question to permit Mr. Pond to force any such position as he again tries to do, on me.

Mr. Pond says he had determined to quit the discussion, because it had become "more of a personal than apicultural nature." It was Mr. Pond who made it personal by ridiculing and speaking disparagingly of Mr. Heddon. "Consistency thou art a jewel" indeed.

I do not know that this discussion will do much good, except that as we have the morality, the rightfulness, the equity of the "priority of location" theory in bee-keeping recognized, it may be a step towards getting an equity decision, and so enforcing by direct enactment a right recognized but not protected by law. If this is not obtained, let every bee-keeper whose honey is his livelihood, practice Mr. Heddon's teachings, as set out on page 86 of the AMERICAN BEE JOURNAL.

Austin, Texas.

[This discussion is altogether too personal to be beneficial, and here let it stop, for the present. Discussions, to be profitable, should be impersonal—confined to measures and not men.—ED.]

Read at the Maine Convention.

Profitable Bee-Keeping in Maine.

J. B. MASON.

The question of most importance, because the one which affects us most pecuniarily is, "Can we keep bees at a profit in Maine? I answer, yes, I think we can. From a wide range of observation in our own State, and from reports received from other States, I find that bee-culture, systematically and understandingly carried on, pays well. Some may say that the Western States possess advantages which we do not. I have traveled some there, and as far as my observation goes, the honey-flora of Maine compares favorably with those States, and nowhere is better honey produced than here. And better still, we realize better prices here than in the West. I have lately conversed with a man who had formerly lived in Illinois, but subsequently moved to Maine, and last season, with the help of a man and a girl, cared for 140 colonies, increased them to two hundred, and produced three tons of honey which he sold for twenty-five cents per lb. at wholesale, thus giving him, for honey, $1400, and the increases were valued at $360, making a total income of $1760. While one such individual case does not prove the assumption that bee-keeping is profitable in Maine, it is one case pointing in that direction, and by gathering facts from such sources is the voice of the State expressed.

Mechanics Falls, Me.

☞ Letters for publication must be written on a separate piece of paper from items of business.

For the American Bee Journal.

Proofs vs. Evidence.

J. E. POND, JR.

It would seem that not only my ideas as a bee-keeper are criticised, but also my knowledge as a lawyer. If I did not know more law than my critics show evidence of knowing, I should at once quit the profession.

A few weeks ago I was accused of mis-applying legal principles; last week a friend insists that I do not understand the principles of evidence. Now, a lawyer who neither understands law nor evidence, must be a pretty poor tool. But does our criticising friend understand fully what he is writing about? He claims to have 45 proofs in favor of the pollen theory against 9 of mine. I did not suppose that either of us had proved anything. He offered a certain amount of evidence, but evidence is not proof.

We prove facts by means of evidence, but the evidence must be weighed carefully in order to judge of its value. Now, in regard to proving the pollen theory to be correct or not, my 9 witnesses that had no diarrhœa, with pollen in the hives, prove conclusively that pollen did not cause the disease in them. I may not be able to judge of proofs, but I do know that evidence may or may not prove a thing, depending upon its value.

Foxboro, Mass.

For the American Bee Journal.

Obtaining Statistical Information.

M. BRAY.

The subject of obtaining statistics in regard to apiculture, may be somewhat worn, but I do not like to see it dropped altogether, and so I propose to outline a little; if it shall lead to any plans which are practical, my object will have been obtained.

I would suggest the forming of an association for the express purpose of obtaining the desired information; and we must make it an object for bee-keepers to report. The time and place to form an association will be at the North American Bee-Keepers' Convention at Rochester, N. Y. Let the members of that association organize for obtaining the desired information, and then invite members of district, State and county associations, and all bee-keepers who are interested, to send in their names with dues (which shall be determined by the association), and take a membership; thus we will have a sprinkling of bee-keepers in all parts of North America as a foundation to build upon.

I do not wish to be considered as writing a code of by-laws, but will name some of the work of the association when organized. The officers shall be, President, Vice-President, Secretary and Treasurer. The Secretary shall receive all dues; and also all reports, transfer them to the Society's books, and receipt for the same. The following will do for a receipt, and can be printed on a postal card: "Dear Sir:—Your report is received and transferred to the Society's books." The bee-keeper will then know that his or her report has been received, and that he or she is on record as a honey-producer. This is not all. When the reports are all in they shall be listed by districts or States, and a list of names that have reported, sent to each member so reporting from such district or State, with address and amount produced affixed to each individual name so reporting. All bee-keepers who have a supply business shall have a short notice of their business appended to their report. Dealers in honey and beeswax shall have the right to take a membership, and have a notice of business and address appended to their names.

Thus we would get what would be an equivalent to a formal introduction to each bee-keeper who reports from the State in which he resides, which would be one form of sociability, and have the satisfaction of knowing what those around us are doing.

I would allow any one to obtain lists of names in districts or States, other than that in which they reside, by sending to the Society a stipulated amount, and naming the State or district which they wish the names from; or any one may have their name and address listed in any district or State, other than their own, with notice of business appended, by paying dues for that district or State.

Members will be considered under obligations to report once a year, and besides their own report, to send such other information as may be of value, and also to lend their influence against fraud and adulteration.

As a prospectus, I would suggest that an invitation be given through the various bee-publications, for all parties interested to send their names with addresses to some one that will be kind enough to receive and care for them up to the time of meeting of the North American Bee-Keepers' Association, all such being considered as charter members.

I would suggest that Dr. C. C. Miller, of Marengo, Ill., is "the right man, and in the right place" to receive and present the names.

This may look visionary to some, but I have talked with several bee-keepers on the subject—some that do not take publications on apiculture—and without exception they have expressed a willingness to assist in it. I think dues can be made small enough to make it an object for any bee-keeper to take a membership. In case we could only get a small list of names, the whole United States might be listed together. If we can get 1,000 names, I would pay $1 for a list—and I have no ax to grind either.

New Almaden, Cal., July 22, 1884.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on the third Tuesday in August, at Leroy Highbarger's, near Adaline, Ogle County, Ill.

J. STEWART, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Disagreeable Weather for Bees.

Bees have done very poorly, so far, in this locality. We have had rain, hail, sleet and snow for the last eight months, with, perhaps, one day of clear weather each week. My bees have been fed since May 1. In fact, it has been so cold that ventilation on the bottom-board has been closed during the season, With the entrance ⅔ closed, I have managed to keep my bees from freezing during July. Mt. Shasta is covered deeper with snow this season than for years, and as I am located within 10 miles of its base, I feel the cool nights quite forcibly.

BYRON BRYAN.

Edgewood, Cal., July 20, 1884.

California Honey at the World's Fair.

To the Bee-Keepers who wish to make an Exhibit at the World's Fair:—The District Bee-Keepers' Association of Southern California intend to send an exhibit to the World's Fair to be held at New Orleans, from December 1, 1884, to June 7, 1885. The collection will be taken from the display made at the District Fair held in Los Angeles this fall. I have made arrangements with the Chief of Installation to make an exhibit of the honey-industry of California, and I would ask all bee-keepers who would like to help in making a display of our industry to send to my address at El Monte, by freight or express, whatever they have that would help out the exhibit. I will see that the material is taken proper care of, and at the proper time sent to New Orleans. All comb honey should be sent in crates, and extracted honey in tin cans, accompanied by suitable glass bottles or jars in which to exhibit it. I hope that all will take an interest in the matter, so that we may make a display that will be a credit to the apiarists of the Pacific coast.

W. W. BLISS.

Duarte, Cal.

Honey Harvest Over.

The honey harvest for this year is past. The season has been only tolerably good. I think that less than half as much honey was gathered this year as was gathered last year. The secretion of nectar was very good from June 8 to 23; but owing to the very poor season prior to June, the bees did not fill the hives with brood, and did not have the necessary amount of laborers to secure the nectar during its flow. Some colonies were few in numbers, and only became populous as the honey in the flowers evaporated. Those colonies will need attention and feed, unless a favorable fall helps them through. The swarms were few in this section, owing to the lateness of the honey harvest and its sudden cessation.

S. HATHAWAY.

Muncie, Ind., July 28, 1884.

No White Honey.

Central New York has no white honey to speak of. We got a fair yield from apple bloom, and a little from clover. Raspberries produced quite a nice flow, but not enough to store in the boxes. Only ¼ of the basswood bloomed, and nearly ½ of that was killed by the May frost, which froze ice as thick as a window-pane. The wind blew from the west very hard all the time basswood was in bloom, and with cool nights the bees did not whiten the combs a particle with wax. The two places, Groton and Lansing, produced over 20,000 pounds of white honey last year—this year not 100 pounds. There have been but very few natural swarms. The outlook is splendid for buckwheat, which is just coming into bloom. If it fails as it did last year, we will have to feed our bees from this time on. W. L. COGGSHALL.

West Groton, N. Y., July 28, 1884.

Bee-Keeping in the Mountains.

We have had a splended honey flow for two months past. We are now 18 miles from the sea, at an altitude of about 2,000 feet above the sea level, and in the mountains between the Sanantone and the Nasemeento rivers, thus having the advantage of the valley bloom as well as that of the mountains. The higher up the mountains, each variety of flowers bloom. A most delightful climate to live in, and many varieties of fruit do well in this mountainous region. Apple, pear, peach, apricot, nectarine, cherry, figs, Japanese persimmon, olive, almond, and English walnut do well here; and we still have some Government land yet for the actual settler. I have recently purchased 3 Italian queen-bees from Georgia, which are the finest, and produce the best workers of any queens I ever bought; and in that long distance, almost from the Atlantic to the Pacific, they came through with a loss of but 7 of the workers. JOS. SAYLER.

Pleito, Cal., July 22, 1884.

The Use of Foundation in Sections.

It is a well known fact, that several manufacturers of comb foundation make it so thin that it cannot be detected if used in the production of comb honey. Now what objections can there be to the using of such foundation in sections? Because it is adulterating honey? Is it adulterating honey, or the cells in which honey is stored? and is that adulteration? No; if we use pure beeswax, it is not adulteration. If we should take two barrels of pure sugar, both alike, and mix them, would that be adulterating sugar? When we use pure beeswax in the manufacture of comb foundation, it cannot be adulteration, as all honey-comb is made of wax. Were paraffine used for foundation, it would then be adulteration.

This extra-thin foundation cannot be called "fish-bone," as it is as thin as natural comb; and if any bee-keepers are so careless as to use thick foundation in their sections, they should be paid only about half-price for their honey. Some say that thin foundation is too expensive; but it is really cheaper at $1 per lb. than the thick foundation, at 50 cents per lb.

Mr. Doolittle says on page 453, that choice comb honey, if really nice, will all melt away in the mouth while being eaten. That is a fact; but that the wax will melt away, I cannot believe. I have tested honey with and without foundation, and cannot see or taste the slightest difference. By filling a section one-third full of foundation, and letting the bees build the remainder of natural comb, we will have an excellent opportunity of testing the two theories. Let us all test it. H. W. SIMON.

Youngstown, O., July 24, 1884.

But Little Honey.

The yield of white clover and basswood honey, in this section, is very light, and unless the fall honey harvest is better, we will have very little honey this season. D. D. UPDYKE.

Bible Grove, Mo., July 18, 1884.

Gloomy Prospects.

We are in the back-ground with our bees and honey this season. It is with gloomy prospects for honey that I enter my bee-yards to work. Basswood is nearly gone, and there is no honey stored yet—no, not a pound to sell from this section, unless we have a good flow from buckwheat. We are overstocked with bees in this vicinity, and the frost killed the basswood buds. It has been very cold and lowery, so that the bees could not work. I hope that there will be honey gathered in other sections of the country. D. H. COGGSHALL, JR.

West Groton, N. Y., July 25, 1884.

Bees have done Swarming.

Bees generally have done swarming. I have had only 35 natural swarms from 128 colonies, spring count. I kept swarming back as much as possible with the extractor. The flow from clover is abundant, but short on account of dry weather. The basswood bloom is good, but bees are unable to secure the honey on account of cold, raw winds during its continuance. Sweet clover is coming into bloom, and bees are storing quite freely. The weather is good at this date. On the whole, it has been a very fair season. Most of the colonies run for comb honey have filled one case of sections, and a portion of the second set. All the hives used for extracted honey are two-story; from the upper story I extracted once, and a portion the second time; all will be ready for the extractor next week. It will be a busy week with me, if the weather is such that I can open the hives, brush the bees, and handle the combs. My 163 colonies are all supplied with laying queens, with a fair prospect for goldenrod, and no extracting from the lower stories. I think I shall be able to put my bees into winter quarters in good condition on natural stores; although I constantly keep putting in my honey-house a barrel of the best granulated sugar, and my feeding-can filled with good syrup made from the same; yet I believe that natural stores are as good as any, if not better, and I shall not give myself the trouble and expense to remove good, natural stores—either pollen or honey—to substitute something else, Heddon's and others' theory to the contrary notwithstanding.

Fredonia, N. Y. U. E. DODGE.

Milk-Weed and Honey-Dew.

Enclosed find part of a plant with its flowers. Bees work on it lively all day, and seem to get a good deal of honey. Owing to the deep red color of the flower, I do not think the honey can be anything extra. Please give name of this plant, and if it is a good honey-producing plant. We are bothered a great deal this year with honey-dew, bees will not work on anything else, and the honey seems unfit for use, being dark and having a very bad taste. All that we can do with it will be to feed to weak colonies next spring. The honey crop with us, so far, is rather light. White clover did not yield much. We will have to depend upon fall honey. Spanish-needle looks promising.

High Hill, Mo. E. NEBEL.

[It is milk-weed (*Asclepias*), rich in nectar, and well-known to bee-keepers. Sometimes the bees get the pollen masses from this weed, so abundantly adhering to their legs as to cause much trouble. The honey-dew honey will, we fear, be very injurious to the bees, if we do not have an abundant fall honey crop.—ED.]

Good Work.

My number of colonies increased from 47 to 82, during the month of June. I had only 2 second swarms. All of my new colonies filled the brood-chamber with comb before they went into the sections. Basswood bloom lasted only 9 days, and the bees filled 30 crates with honey; but they did not cap ¼ of it, on account of the cessation of the honey flow. I extracted 1,100 pounds of honey, and the brood-chamber is yet full. One hive weighed 122 pounds before extracting the honey which it contained, and all of my honey is No. 1 in every respect. I do not rear queens for sale; but I do rear bees, and produce honey too, when there is any in the flowers. FAYETTE LEE.

Cokato, Minn., July 30, 1884.

* * *

☞ The bee-keepers of Decatur and surrounding counties are cordially invited to meet on Saturday, August 16, 1 o'clock p. m., at the residence of R. R. Cobb, one mile east of Greensburg, Ind., for the purpose of organizing a bee-keepers' society.

HENRY CARTER.

* * *

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

What ails the Bees?

One of my colonies of bees seems to be in a critical state, and I do not understand the cause. Two of the combs containing brood are being torn to pieces and the brood thrown out. The larvæ appears lifeless. It may be foul brood. Please state in the next issue of the Weekly BEE JOURNAL, the cause and the remedy.

Goshen, Ind. V. KEIPP.

ANSWER.—As usual, the description of the condition of your colony is not minute enough to warrant me in saying just what might be the trouble. So far as you describe the conditions, I should not call the trouble foul brood at all, but it seems more like the work of the moth-worm. Can you not see any of these worms, their paths or cocoons?

Queer Little Bees.

I have a full colony of bees like the sample sent you. What do you think of them? I caught them wild last season. I now have them in the "hive of all hives," the Langstroth. These bees have not attempted to swarm, but have worked with a will all summer. The queen is very prolific, so that the hive is overflowing with bees; and that too with a capacity for 72 pounds of box-honey. I have up to this date taken 305 pounds of honey in one-pound boxes, and every day they are storing large quantities of very white honey, while other bees in this neighborhood are storing dark honey. At the end of the season (which is not yet) I will report the largest yield of comb honey ever obtained from one colony of bees in one season. I might say the drones from this colony are nearly black, and of good size. The queen is large and the workers small.

CHARLES WHITE.

Tarry Town, N. Y.

ANSWER.—The sample of your bees was received, but the feed being too soft, the bees and it were all rolled together in one mass. I have washed and examined them as closely as possible, and will say that they are the queerest looking little things I ever saw. If I had seen one at work on the flowers here, I should have called them "sweat bees," or something closely related to them. Considering your statement, and the looks of the samples sent, I am quite surprised.

Late Breeding.

1. I have read somewhere that we should have our bees breed late in order to have them winter well, and also to prevent "spring dwindling." How shall I accomplish this? Is it done by feeding?

2. I have my hives in a straight row about 18 inches apart. Would you advise me to drive stakes and nail planks to them, say a foot or more away from the hives, and then fill up the space with shavings or coarse sawdust? Of course I would give the hives ventilation at the entrance, as recommended for boxing up a single hive. I would rather take care of my bees this way, if it will answer the purpose as well, because I cannot spare them room in the cellar, and this is the easiest way I can do, provided it would be as well.

3. Would sawdust cushions answer as well as chaff cushions or forest leaves, to put above the frames?

M.

ANSWERS.—1. Bees can be kept breeding at any time of the year, when not too cold, by slowly feeding them. I have, on various occasions, experimented with feeding them in autumn, to produce young bees and strong colonies for wintering; and in the spring to stimulate breeding up strong colonies for the surplus harvest; but I have abandoned both practices. It is very unfrequent that spring stimulating produces good results in this locality. As for wintering, I consider young bees not as good as old ones.

2. While I prefer the cellar to out-door packing, the plan you speak of will be a great help in out-door wintering.

3. No; I should much prefer the chaff, or forest leaves for cushions. Sawdust for upper packing has not given good results.

Bee-Stings, Cross Bees, etc.

1. My bees are a great deal crosser than ever before. I fed them rye flour, salt water, and sugar in the spring, to stimulate them. Is that the cause? or does having more of them together in one yard cause them to be crosser?

2. Will much stinging affect the wrists and muscles of the arms? Mine are affected with something more than common.

3. Are the bees in the East smaller than those in the West? The reason I ask this is, I have one of Alley's drone and queen traps, and not one bee in ten can pass through the perforated zinc, although Mr. A. says there are thousands of them in use.

The honey flow here is over, and the crop is 1/3 less than that of last year.

D. S. KALLEY.

Ferndale, Ind., July 22, 1884.

ANSWERS.—1. Feeding rye flour, salt and sugar would not make your bees cross, unless the sugar was carelessly given, and got them to robbing. Robbing bees are always cross; and robbed bees likewise. Where hives are set close together, I have fancied it had a tendency to make the bees cross.

2. I think it will. I think bee-poison constantly discharged in the blood for years, will produce symptoms of neuralgia or rheumatism.

3. I do not think there is any difference in the size of bees in the East or West. I do think there is considerable difference in the size of bees of different colonies located wherever they may be. I have little doubt but that old combs produce smaller workers than new combs, and the same is true of queens. Many report that queens pass through Jones' metal; so Mr. Root made a smaller passage through his new metal honey-boards. We have used quite a number of both, and in our apiary the Jones' metal excludes all queens under the most radical tests; while the new Root metal has such contracted passages that our workers get through them with great difficulty.

Waxing Honey-Barrels.

Will Mr. Heddon please answer the following questions through the Weekly BEE JOURNAL:

1. How do you wax barrels on the inside, so that they will hold honey?

2. What is the cause of honey-dew?

J. T. GRAVES.

Centre Point, Ky., July 22, 1884.

ANSWERS.—1. Melt about a gallon of wax, and when quite hot, pour it into the bung-hole of the barrel. Have the barrel warm also, for the cooler the wax or barrel, or both, the thicker coat of wax will be left, and a very thin coat is the best, considering the cost. When you pour in the hot wax, see that the barrel has a vent, or you may get burned. Shake the wax all about the inner surface, by turning the barrel over, and changing ends with it rapidly. After you think the wax had touched all parts, pour out most of the wax which you poured in. The waxing costs as much as the barrel, and there is no need of waxing good, worthy cooperage.

2. All the honey-dew I have ever seen was caused by the aphidæ, which are fully described in the BEE JOURNAL.

Convention Notices.

☞ The second annual picnic of the Eastern Iowa and Western Illinois Bee-Keepers' Association will be held at Black Hawk's Watch Tower, four miles south of Rock Island, Ill., on Thursday, Aug. 14, 1884. Trains will run from Rock Island, near post-office, every 30 minutes. Fare from Rock Island and return, 17 cents. Ample supply of tables and seats, on the grounds. First-class restaurant in the pavilion. Ice water free. Headquarters of the bee-keepers will be in the pavilion. Meeting of the members at 11 o'clock, to review the past and block out the future. Dinner at 12 m. After dinner, five minute addresses by members and visiting friends. The C., R. I. & P. railroad will return those attending the picnic who have paid full fare one way, at one-third rates. Apply to Secretary, on the grounds, for return certificates.

WM. GOOS, *Sec.*

I. V. MCCAGG, *Pres.*

☞ The meeting of the Bee-Keepers' Association of Northeastern Kentucky, will be held in the city of Covington, Walker's Hall, on Aug. 13, 1884. G. W. CREE, *Sec.*

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ In reply to many correspondents let us say that we take any kind of postage stamps as money, but coins should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

◆

☞ "THE MAN FROM TEXAS"—A Western romance by Henry Oldham, just published by T. B. Peterson & Brothers, of Philadelphia, Pa., has the rare merit of taking a firm hold upon the reader from the start. It is a novel that for excitement and absorbing interest, will certainly take a front rank among all the romances of the present day, being literally packed with stirring adventures and hair-breadth escapes from beginning to end. Price, 75 cents. For sale by booksellers and news-agents everywhere.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker. did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)..	3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)....	2½ " ..	1 50
Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker...................	2 " ..	1 00
Little Wonder smoker..........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch............		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

NEW

HONEY PAILS

The accompanying illustrations show a nest of pails with the sides tapering, for marketing extracted honey. The covers are deep and the pails are made with special reference to filling them for the retail honey-trade. They are made in a superior manner and are quite attractive in appearance, when filled and nicely labeled.

	4 lb.	7 lb.	13 lb.
Per doz.	$1.25	$1.60	$2.00
Per 100	8.00	10.00	14.50

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DR. FOOTE'S
HAND BOOK OF HEALTH,
HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

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What to Eat,
How to Eat it,
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Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
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After-Dinner Naps,
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It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

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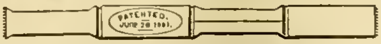

We have again increased our capacity for making the "BOSS" ONE PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS,** to

ORDER EARLY,
And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.,
49BCtf Watertown, Wis., Dec. 1, 1883.

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65 *ENGRAVINGS*
THE HORSE,
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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BEES.—I offer For Sale 100 colonies of Italian Bees, in good, new, well-painted Hives, Gallup Frames, 12 frames to a hive; every comb straight and good; most of the combs built on foundation. One colony, $9.00; 10 or more colonies, $8.00 each.

QUEENS.—I breed Queens by the best methods and from the best stock. Queens ready after May, 20th. Untested, $1.00; tested, $2.00; selected tested, $3.00.

NUCLEI, with untested Queen, $3.50; with tested Queen, $4.50; with selected tested Queen, $5.50.

INSTRUCTION.—July 7, 1884, I shall begin instructing a class in bee-keeping—class for men and women. Full course in Theory and Practice. For Circulars of information as to this class, and Price List of Hives, Frames, Sections, Implements, Books, etc., address, **O. CLUTE,**
10Dtf IOWA CITY, IOWA.

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NEW SHOP AND NEW MACHINERY!!
The Largest Manufacturer of Bee Hives Sections, etc., in the World!

Our capacity now is a **CAR-LOAD** of goods daily. Hives manufactured from soft white pine, and sections from white basswood. Send for our new Illustrated Price List for 1884. It is **very important** you should have our new List before ordering, as prices are arranged differently from last season.

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TESTED QUEENS, $2; untested, $1; 4-frame Nuclei, $3.50 and $4.50. Mississippi Wax Extractor, $3. OSCAR F. BLEDSOE, Grenada, Miss.
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Italian Queens and Bees from March to November.
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6 Warranted Queens for $5.

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SEND YOUR NAME AND ADDRESS FOR MY 20-page Price List of Italian, Cyprian and Holy Land Colonies, Nuclei, Queens and Apiarian Supplies. H. H. BROWN, Light Street, Col. Co. Pa.
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We want an agent and local reporter in every farming community to represent City and Country and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
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Select-Tested, to breed from $3.00
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Address, **DR. G. L. TINKER,**
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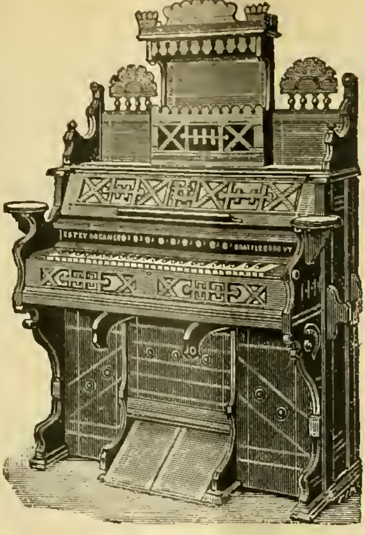

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DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.
MRS. FRANCES DUNHAM, De Pere, Wis.

Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.
Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.

Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.

All prefer the foundation I manufacture on one of your mills, to that made on any other machine. I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.
Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNHAM: Kenton, Ohio, Dec. 29, 1883.

After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.

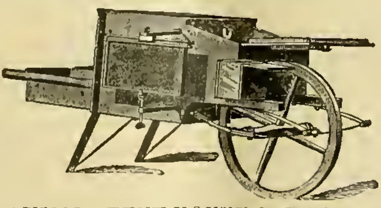
I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is to me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to

FRANCES DUNHAM, De Pere, Wis.

2BCtf

SYSTEMATIC AND CONVENIENT.



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REVOLVING COMB-HANGER,
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Price, complete, only............$18.00.

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Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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NEW AND USEFUL

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R. S. BECKTELL, Three Oaks, Mich.
30A3t

ITALIAN QUEENS, DADANT FOUNDATION, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to
Ctf A. I. ROOT, Medina, O.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
ABtf **J. VANDERVORT, Laceyville, Pa.**

1868. 1884.

HEDDON'S COLUMN.

BEST GIVEN COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey	$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
One Hive in the flat	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

[illegible] SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from	$ 3 00
Untested	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

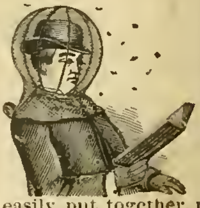
CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

A NEW BEE-VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

ALFRED H. NEWMAN,
923 West Madison Street. Chicago, Ill.

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid ... in May and June, each	$ .50
Italian—untested—not warranted, in May and June, each	1.00
Italian—warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Mich.,

Is now making a specialty of rearing fine Italian queens. All queens bred from the purest and best of mothers, and the cells built in full colonies. Single queen, $1; 6 for $5; 12 or more 75 cents each. Tested queens, $1.50 each. Make money orders payable at Flint, Mich. 31Atf

BEE-KEEPERS, before ordering your **APIARIAN SUPPLIES,** Send for our large Illustrated Catalogue, sent free to any address.
10A24t **E. KRETCHMER, Coburg, Iowa.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

SPECIAL OFFER FOR 30 DAYS.

Italian Queens from choice imported mother, 60 cents each. To farther introduce my stock of Queens, I will dispose of a large number at a reduced price. I will send Untested Queens to any one who will order two or more at one time, and mention this advertisement, for 60 cents each and guarantee safe arrival of the same. This offer only holds good until Sept. 1. Circular of Bees and Queens free. **CHAS. DUVALL,**
32A1t Spencerville, Mont. Co., Md.

50 TONS

OF COMB HONEY WANTED.

Believing it to be advantageous to both seller and buyer to deal with the same parties year after year, we have for several years bought the entire honey crop of many bee-keepers. In view of our increasing trade, we wish to add to our list of producers, the names of a few more reliable men whose honey crop is from one to ten or more tons yearly. Through the actions of certain bee-keepers, the trade now demands mostly one-pound sections. We pay **spot cash** at railroad station for what we buy. Those desirous of becoming acquainted with such dealers, will state how much honey they have of each size section. How much of each quality. How soon the whole or part of it can be in shipping order. Name lowest cash price, and say how much more is in your locality. If answer is favorable, we will call on you. York State, Michigan, or Vermont preferred. Address,

F. I. SAGE & SON, Wethersfield, Conn.
31A4t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

IF YOU WANT A VEHICLE,

SEND A POSTAL CARD TO THE

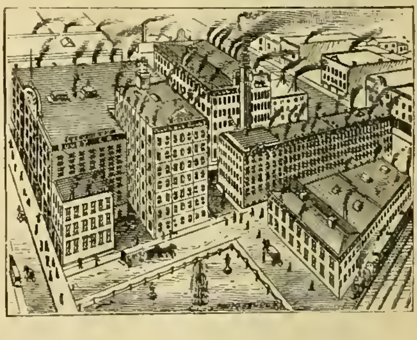
COLUMBUS BUGGY CO.

COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., August 13, 1884. VOL. XX.—No. 33.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **$1**.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

FOREIGN POSTAGE, EXTRA:

To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the Chicago P. O. as Second Class Matter.

ADVERTISING RATES.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* **7** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, space, for each insertion

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00.	
and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)	2 75..	2 50
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work	4 00	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing	3 00..	2 75
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees	2 75..	2 50
King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
British Bee Journal	3 75..	3 50
The 7 above-named papers	8 25..	7 00

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the *last column*.

☞ The next meeting of the Bee-Keepers' Association of Boone and Hendricks counties will be held at H. Coxe's apiary, 1¼ miles east of Fayette, Boone County, Ind., on Saturday, Aug. 16, 1884. O. KNOWLTON.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

A. H. NEWMAN, Chicago, Ill.,
C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH, Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

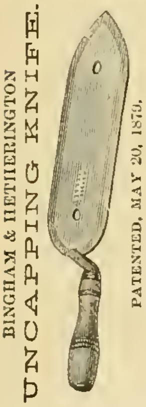
150 COMPLIMENTARY,

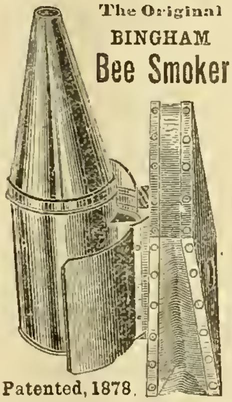
and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
5AB1y HAMILTON, Hancock Co., ILL.

VALUABLE
ORIGINAL PATENTS.


BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

BOOKS!

Sent by mail, on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens — Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom. Less than 200 will have a blank where the name and address can be written.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject: suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTNOTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **50c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, **$2** per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., AUGUST 13, 1884. No. 33.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

☞ Every subscriber should carefully preserve the numbers of the BEE JOURNAL for reference. Many an article is worth the price of a year's subscription. When the information therein contained can be readily referred to, it is doubly valuable. We can, therefore, do our readers no greater service than to recommend them to procure a Binder, and file away each number as fast as received.

☞ We regret to have to note the death of one of our subscribers and correspondents, F. M. Cheney, of Sutton, N. H. He went to Tennessee last spring to take charge of an apiary for H. E. Andrews, of about 100 colonies, and died about the middle of last month of malarial fever.

☞ We regret to learn that Mr. J. T. Wilson's house was burned early on the morning of Aug. 5, at Mortonsville, Ky. He writes us that many bee-keepers are owing him, and with this calamity he is crippled financially. Those who owe him should at once send him the necessary funds to help him in this, his "hour of need."

☞ The aphidæ that trouble pot plants are green, and the tender new growth on plants often becomes completely covered with them before they are noticed. These lice are often called the ants' cows, because the ants follow them to gather a honey that exudes from their bodies ; there is a white aphis that attacks the roots of plants ; the ants follow this also.—*Exch.*

Are Bees an Injury to Fruit?

Mr. L. A. Lowmaster, of Belle Vernon, O., has sent us a long extract from the New York *Sun*, containing the usual charges against the bees, *i. e.*, that they are an injury to fruit growers, the following being the last paragraph :

> Admitting that the accusations made against bees in regard to their destructiveness of fruits, have been fully established. the question naturally arises as to the rights of the bee-keepers in this matter. Has any man a right to raise and keep an insect that is likely to annoy his neighbors in various ways, in addition to destroying his fruits? We believe this question has already been taken into the courts, and decided against the bees, and it will, no doubt, be taken there many times in the future, if the bee-keepers continue to increase their stock of bees as rapidly in the next few years as they have in the past two or three decades. Honey is no doubt a very desirable luxury, but scarcely so important, or of so much value to man, as is fruit ; and while we admire the "busy bee," and its stores of nectar, there must be a limit even to the multiplication of an ordinarily useful insect.

Mr. Lowmaster asks what we think of the article, and says that it has been copied into many of the leading newspapers, and is doing bee-keepers a serious injury.

It is the old story of re-vamped—assertions without proof—vindictiveness without alloy.

Without the bees, fruit growers would soon be in search of other employment. The value of the bees in fructifying the bloom, by carrying the pollen masses from the male to female flowers, is everywhere acknowledged. Should this war upon the bees be pursued until they become extinct, fruit and flowers would soon also cease to offer food for man and beast, as well as to beautify the face of nature. Then fruit-growers would *mourn* and *wail*—having destroyed their best friends, the bees. And the fact that "through ignorance they did it," would not offer the least excuse for such insane folly.

The Weather.

Cold weather in every month in the year seems to be the rule, so far. To-day (Aug. 8) when it should be expected to be uncomfortably hot, it is cold enough for an overcoat ; in fact we have had but little weather so far that has been what may be called "seasonable." In Europe it seems to be about the same. The London *Journal of Horticulture* of July 28, has the following "notes of the season :"

> Although the weather during the latter part of May and beginning of June was dry with bright sunshine, the thermometer sank often at night during that time to 30° and 32°, consequently vegetation made little progress. Large tracts of strawberries are almost totally destroyed through the drought and insects. Plums that promised a great crop have dropped ; apples and pears are stunted ; gooseberries, where they were not over-pruned, are a fair crop ; but with the exception of the last-named and currants, the fruit prospects are very poor.
>
> I only removed the feeders from my hives on June 25, as up till that time little or no honey was to be had. On the morning of the 26th it was doubtful whether I had acted wisely in removing the feeders, but a favorable change came, and on the 27th I put on supers, which were at once taken possession of by the bees, which wrought vigorously, especially in the afternoon, as it was too hot at mid-day. On Saturday the thermometer stood at 88° in the shade, but cooling down a little the next five days, when it culminated in a severe thunder-storm and deluge of rain. During that one week the bees increased much in weight, the strong ones completing from 12 to 15 pounds of comb honey in supers. besides storing much in the body of the hive.

☞ Travis county, Texas, has appointed the following committee to represent it in making a Bee and Honey exhibit at the New Orleans Exposition : J. G. Taylor, Chairman ; W. W. Madaris, Dr. W. Styles, B. Palmer, and R. J. Kendall.

Local Convention Directory.

1884. *Time and place of Meeting.*

Aug. 13.—Northeastern Ky., at Covington, Ky.
G. W. Cree, Sec.

Aug. 16.—Decatur, at Greensburg, Ind.
Henry Carter.

Aug. 19.—N.W. Ill. & S.W. Wis. at L. Highbarger's.
J. Stewart, Sec., Rock City, Ill,

Sept. 1, 2.—W.N.Y. and N.W.Pa., at Jamestown, N.Y.
W. A. Shewman, Sec.

Sept. 1, 5.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mic

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

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The Stinging Bees of India.

The American Edition of the *London Lancet* contains the following account of the effects of severe stinging by the large bee of India—the *Apis Indica*. We do not think that we want any of these bees in America. The Cyprians are bad enough—but for these bees of India (*Apis Indica*), as well as their more irrascible cousins of Java (*Apis dorsata*) we have no use. Let them stay where they are. Here are the letters referred to:

To the Editor of The Lancet.—As stinging by bees, especially if very severe, is an accident rarely met with, I have thought the following account from my brother-in-law, Mr. Herklots, a coffee planter on the Neilgherry Hills, South India, of severe bee-stings suffered by himself, with the symptoms that followed and the treatment adopted, will be found by you to be sufficiently instructive for insertion in *The Lancet*. You will see by the account that the patient is still suffering from the effects of the stings.

G. Herklots Vos, M. R. C. S. Eng.,
House-Surgeon, Training Hospital, Tottenham, N.

"Coonoor, Madras, March 7, 1884.

"About Sep. 24, last, I went out with a friend to visit some property some three miles distant. We went to a steep hill-side to lay out a trace for a new road. While the men were cutting the track, or, rather, clearing the brushes away, my friend and I were looking about to see which would be the best line for the road. I took up the staff, and went with it to a small rock, when the overseer, who was by, said, 'Sir, there are bees about.' I did not perceive the force of this statement at once; but, to my surprise, I found the coolies gliding away with great caution and unusual rapidity, and leaving me. The bees, which were of a large variety (*Apis Indica*), were now flying angrily about me, and occasionally coming right at my face. I had let go the tracing staff, and held only a small riding cane. With this I was soon actively engaged in hitting at the bees. I probably knocked down three or more of them with my cane. This must have enraged them, and I was soon made to feel the effects of their venom. They settled on the back of my hands and wrists, and all over my face, in every case piercing me with their stings. Wild with pain, I rushed to a bush, crept under it, and covered my face with my hands, coat-collar and hat as much as possible, endeavoring to remain motionless. I could not endure this more than four or five minutes; so I got up and climbed the hill-side, at the top of which were a plateau and a road. This was a very steep climb of at least 150 feet, over boulders and through jungle, with precipices; so that I had to struggle on through a regular maze, having again and again to retrace my way. All the time the bees were at me. I was soon so much exhausted that I could only move a few yards (eight or ten) without having to stop for breath. I had to use my hands as well as my feet in making the ascent. Whenever I stopped, the bees settled upon and stung me more than when I was moving on; my face was covered with them. I had the sensation that they were crawling on my face over each other's backs, as if they were fully two and three deep in number. They made the most persistent efforts to sting me in my eyes—that is, to force their stings between my fast closed eyelids; but they stung my lips most, and several went up my nostrils, and more than once I had to eject them from the latter place by a forcible expiration, closing one nostril with a finger. All this time my sufferings were severe, and it was with the greatest difficulty that I managed to reach the road on the plateau. When there, I had a plain path all the way down the hill to where my pony was, quite half, or, I should say, three-quarters of a mile. I was then able to protect my hands by placing them in my pockets. From the time of commencing to ascend the hill, I had not retaliated on the bees, but, judging it the best policy, had allowed them their way with me. Soon after I reached the plateau, as far as I can say, about half an hour after the bees had begun to sting me, I felt very ill. I had sudden slight indications of rigors, and felt very sick. But I had to struggle on, and get home somehow.

I reached my pony, which is a spirited animal, and mounted him at once. The bees, though less in number, were still at me; and I imagined that they would attack my pony, but they did not. I took the shortest route home, a very bad cross-country track. The bees followed me some distance, and gradually left me. Soon after I was in my saddle, I was vomiting very severely, though I did not bring up much, and this was followed by severe purging of the bowels, the fæces being quite green. I felt very ill, and had to hold on by the pommel of my saddle. I was retching all the way home, and had two actions of the bowels. When I was able to open my eyes I could see that my face was covered with stubble, which I knew were the stings of the bees: I took care not to touch them. On reaching home, I went to my own room and threw myself on the bed. The doctor was then sent for. I continued to be very sick and was constantly purged. The stings were extracted by my wife and others, and for several days subsequently the doctor found and extracted others. My wife tells me that she thinks there must have been quite 300 stings taken out. Food was most abhorrent to me, and for some nights I could not sleep; but within a week I was up again, though very weak. I have felt the results of this adventure in weakened health for months since, and have lately taken a short sea trip to Calcutta for a change, since which I have somewhat improved in health. The medical treatment consisted of the removal of the stings, and the external application of the following—castor-oil one part, steel-drops one part, collodion six parts; with the internal administration of full doses of steel-drops (the affected parts presented an erysipelatous blush) minim doses of impecacuanha wine to relieve vomiting, solution of morphia to relieve pain and to induce sleep. When the morphia had the former effect only, full doses of bromide of potassium and hydrate of chloral acted as efficient hypnotics."

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☞ One of the oldest Queen Breeders in this country, writes thus: "Please stop our advertisement; we are getting more orders than we can fill." This shows the value of advertising in the Bee Journal, for that advertisement appeared in no other paper.

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☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

◆

☞ In the article on "Reversible Frames," on page 488, in the second paragraph and ninth line, read "*inexpensiveness*" instead of "*inexperience*;" and in the next paragraph and fourth line, read "*strengthen*" for "*straighten*."

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☞ Letters for publication must be written on a separate piece of paper from items of business.

◆

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

Too Much Tare—Is It Just?

A California Exchange says, that there is much complaint among apiculturists and not without just reason, that dealers are in the habit of extorting too much tare, that they are not satisfied with tareage of cases alone, but require the cans also. It says:

> Look at the facts and see if there is not good reason for complaint. We have weighed many cases and find them to run from 10 to 12 pounds, an average of about 11 pounds, and cans at 1¾ pounds, often less. The tare exacted from 16 to 18 pounds, when in justice to the producer it should not be more than the weight of the cases alone. Sixty pound screw-top cans, new at the shop, cost from 35 to 40 cents each, and cases 30 cents each; a case with cans $1.00. It is an established practice among dealers of canned goods, in buying or selling, to deduct the weight of the case alone. Now why, we ask, should honey be made an exception? Is it just? When the apiarist purchases a can or case of coal-oil or lard, or other canned goods from a groceryman, the weight of the can or cans is not deducted, but if he should ever return the same cans filled with honey, the groceryman will deduct the weight of the same cans, thus requiring the apiarist to give them back to him, and when empty, will again sell them back to the apiarist. New cans made expressly for honey, when sold by weight with the honey, bring more than half their cost. Apiarists have good and sufficient cause for complaint, and should remedy this evil, refusing to submit to such extortion.

A Brief Sermon on Cranks.

The *Burlington Hawkeye* publishes a great deal of nonsense, but sometimes in its amusing way it states indisputable facts. The following is from a very recent issue:

> What would we do were it not for the cranks? How slowly the tired old world would move, did not the cranks keep it rushing along! Columbus was a crank on the subject of American discovery and navigation, and at last he met the fate of most cranks, was thrown into prison, and died in poverty and disgrace. Greatly venerated now! Oh, yes, we usually esteem a crank most profoundly after we starve him to death. Harvey was a crank on the subject of the circulation of the blood; Galileo was an astronomical crank; Fulton was a crank on the subject of steam navigation; Morse was a telegraph crank. All the old abolitionists were cranks. The Pilgrim Fathers were cranks; John Bunyan was a crank; any man who does not think as you do is a crank. And by and by the crank you despise will have his name in every man's mouth, and a half completed monument to his memory crumbling down in a dozen cities, while nobody outside of your native village will know that you ever lived. Deal gently with the crank. Of course, some cranks are crankier than others, but do you be very slow to sneer at a man because he knows only one thing and you cannot understand him.

Traveling Sweetness.

Under this head the Augusta, Ga., *Evening News* gives the following account of the shipment of bees to the North from that place:

> A large lot of boxes for shipment in the Southern Express office attracted the attention of the *Evening News* this morning, and upon investigation found them to be bees from the apiary of Dr. J. P. H. Brown, of this city. There were seventeen boxes in all, and each box so arranged as to hold four colonies of the little sweeteners in separate apartments. Capt. Boyle, agent of the Express Company, tells us that Dr. Brown ships large quantities of bees to different parts of the country, but the present one is the largest shipment ever made by express from this section. The Doctor is authority on bee-culture in the South, and bears a well-earned reputation in this line over the United States. He makes a specialty of Italian bees, which is one of the best and most prolific kind, and his methods of hiving and shipping are attended with perfect safety to the bees.

☞ T. B. Peterson & Brothers, Philadelphia, Pa., will issue, in a few days, a cheap edition in book form, for the million, of Mrs. D. E. N. Southworth's Last and Best Work, "SELF-RAISED, OR, FROM THE DEPTHS," which will prove to be the most popular work ever published in book form. It is in a large duodecimo volume of 658 pages. Price 75c.

☞ The Western New York and Northwestern Pennsylvania Bee-Keepers' Association will hold its semi-annual meeting at Jamestown, N. Y., on Sept. 1 and 2. A general invitation is extended to all bee-keepers. W. A. SHEWMAN, *Sec.*

☞ The bee-keepers of Decatur and surrounding counties are cordially invited to meet on Saturday, August 16, 1 o'clock p. m., at the residence of R. R. Cobb, one mile east of Greensburg, Ind., for the purpose of organizing a bee-keepers' society.

HENRY CARTER.

☞ The Ohio bee-keepers will hold meetings in which they will have lectures, essays, and reports from bee-keepers, during the Ohio State Fair, which will be held at Columbus, O., Sept. 1 and 5 inclusive. All interested in bee-culture are cordially invited to attend. C. M. KINGSBURY, *Sec.*
DR. H. BESSE, *Pres.*

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 11, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—The demand for extracted is fair, and to all appearances, gradually improving. It brings 6@9c per pound on arrival. There is a small demand for comb honey, but we had small offers only, and a good deal could be sold. It brings 14c per pound on arrival.

BEESWAX—Offerings plentiful at 30@32c on arrival. C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—Sales of comb honey continue slow. As yet there are no arrivals of this season's crop. We have received several small shipments of new extracted honey, which sold readily. For prices on this year's crop, we quote: Fancy white, 1-lb., 16@18c; fancy white, 2-lb., 15@16c; fair to good, 1 and 2-lb., 12@14c; fancy buckwheat, 1-lb., 12@13c; 2-lb., 11@12c. Extracted, white clover, in kegs or small barrels, 8½@9c; dark grades, 7@7½c.

BEESWAX—Prime yellow, 30@32c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in, and selling at 16@18c. for best white 1 and 2-pound sections. New extacted, 8@9c. Honey in unglassed sections sells the most readily. Old comb honey all gone.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—This week we have had liberal receipts of comb honey, and the prices are irregular. As a rule, the honey is of first quality, and put up in good shape; a gradual improvement is noted in this respect. Prices range from 14@16c for the best; occasionally a case sells for more than that, but it is in a retail way. The extracted honey is still sluggish, at nominal prices—6@8c per pound.

BEESWAX—Fair receipts; prices, 30@37c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—The market is in bad shape for the selling interest, there being no shipping demand, and next to nothing doing on local account. To make matters worse, offerings are being urged on buyers by too many parties, some of whom have little or no knowledge of the honey trade, and are not in a position to be able to do it justice Quotations are largely nominal. White to extra white comb, 12@13½c; dark to good, 9@11c; extracted, choice to extra white, 5@5½c; dark and candied, 4c.

BEESWAX—Wholesale 25c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—Choice new 2-lb. sections are now bringing 17@18c, and 1-lb. 18@19c, ½-lb. 19@20c. Extracted in fair demand at 7@8c, extra choice would bring 9c in barrels. No other packages wanted in this market.

BEESWAX—Nominal, 30@35c.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—We are glad to be able to give more definite quotations on honey. Sales have been made during the week in a small way at 16@17c for best, white 1-lb. sections; 15@16c for second shade. Of lower grades and 2-lb. sections, there has been no movement, but it might be quoted at 14@15c. There are a good many little lots scattered about our market, retarding the ready movement of large lots. Extracted honey, dull.

BEESWAX—30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

GEO. W. MEADE & CO., 213 Market St.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

CORRESPONDENCE

For the American Bee Journal.

The Hibernation of Bees.

WM. F. CLARKE.

Letters are pouring in upon me, criticising and asking questions about my recently announced discovery, to an extent quite beyond the possibility of answering them all by private correspondence; and as the subject is one of general interest, there is no better way of discussing it than in the bee-publications.

Apiculture is to me, and to many other "dabblers," as Mr. Heddon styles us, a most fascinating pursuit; but our life-work lies outside of it. and we can only give to it the time economized from other and more pressing duties. Let no correspondent, then, feel slighted if a private letter is unanswered. I will endeavor to meet all the really important points raised by these communications, thus far, in the present article.

MY "BASIC PRINCIPLE."

A much-esteemed friend, who was the first to write me on the subject, threw a cold, wet blanket over my enthusiasm by saying, "Your basic principle, that bees succeed better in trees than elsewhere, is all wrong." But let me say that is not my "basic principle." The fact that I had never met with, heard, or read of a colony of bees being winter-killed in a hollow-tree, was what set me to thinking. Very likely I put the thing too strongly, but I put it as it appeared to my own mind. It may be that bees are sometimes winter-killed in their tree-trunk homes, but it is quite certain that they usually do well in such places. The question *why* this is so, was what led to a course of thinking and investigation which resulted in the conviction that bees. in a normal condition, hibernate. That is my "basic principle."

"WHAT IS HIBERNATION?"

I have been surprised at receiving this question from quarters whence I hardly expected it. And yet there is no great cause for surprise when it is considered how little has been said about it in our bee-literature. I do not own a complete set of the BEE JOURNAL, (I wish I did!) but I have searched in vain through all the back volumes in my possession for anything on the subject. If you will refer to your file, Friend Newman, I should not wonder if you make the discovery that this is the first article headed "Hibernation," which has appeared in all the XX volumes of its history.

All sorts of apicultural theories have been discussed—some of them fanciful enough—but this important matter has been singularly overlooked. The same is true of the bee-books. Even Prof. Cook, eminent entomologist as he is, omits all reference to it in his valuable "Manual of the Apiary." Yet, though ignored by the bee-books, I find in as old a work on "Entomology" as that of Kirby and Spence, a long chapter on the "Hibernation of Insects;" several pages of which are taken up with a special discussion on the hibernation of bees.

"Hibernation," says the Encyclopœdia Brittanica (last edition), "is the term employed by naturalists to denote the peculiar state of torpor in which many animals, which inhabit cold or temperate climates, pass the winter." The article proceeds to show that not animals merely, but insects, pass the winter in this "peculiar state of torpor." Hibernation takes place in different degrees; the American black bear and the hedgehog being the most perfect samples of it. These creatures are torpid all winter long, taking no food through the entire season. Other animals, and some insects, bees among the rest, sink into a state of torpor or semi-torpor for a briefer or longer period, rousing up now-and-then, and taking "a good, square meal."

THE PHILOSOPHY OF HIBERNATION.

I cannot state this better than in the words of Kirby and Spence: "If insects can boast of a greater variety of food than many other tribes of animals, this advantage seems, at first sight, more than counterbalanced in our climates by the temporary nature of their supply. The graminivorous quadrupeds, with few exceptions, however scanty their bill of fare, and their carnivorous brethren, as well as the whole race of birds and fishes. can at all seasons satisfy, in greater or less abundance. their demand for food. But to the great majority of insects, the earth, for nearly one-half of the year, is a barren desert, affording no appropriate nutriment. * * How is this difficulty provided for? In what mode has the Universal Parent secured an uninterrupted succession of generations in a class of animals, for the most part doomed to a six months' deprivation of the food which they ordinarily devour with so much voracity? By a beautiful series of provisions founded on the faculty, common also to some of the larger animals, of passing the winter in a state of torpor—by ordaining that the insect shall live through that period, either in an incomplete state of its existence, when its organs of nutrition are undeveloped, or, if the active epoch of its life has commenced, that it shall seek out appropriate *hybernacula*, or winter quarters, and in them fall into a profound sleep, during which a supply of food is equally unnecessary." Let me lay it down as a general proposition, that all we have to do for our colonies of bees, is to provide them with "appropriate *hybernacula*."

If it be said that this is what we have been trying to do all these years in our plans for wintering bees, I answer, "No;" we have not provided "*hybernacula*," places in which bees could follow their natural instincts and hibernate. Most of our winter arrangements have been such that they either could not go into their normal condition of torpor, or having gone into it, could not get out of it sufficiently to appease the claims of hunger.

When kept too warm, bees cannot go off into their natural state of torpor. They become restless, get hungry, eat freely, and must void their excrement; if confined to the hive, they befoul it, and then comes diarrhœa, with death in its train. The opposite extreme of temperature has a like effect. They are too cold. Hunger awakes them. Their food is as cold as they are. What is the usual effect of cold victuals on a cold eater? We all know.

Occasionally and by accident, we hit the hibernating condition. Then our bees consume but little food, and divide their time between eating and sleeping. They wake from their torpor to eat what nature requires. and, in that quiet state, but little is needed. Digestion, we may well believe, is a very slow process in a torpid bee, and when completed, the result is a dry, powdery excrement, long ago known by bee-keepers to be one of the signs of healthy and successful wintering.

One of my correspondents writes: "Friend Clarke, I want you to remember that diarrhœa is the cause of winter trouble; that is well-known, the point to get at is the cause of diarrhœa." Well. here it is: *non-hibernation.* If bees are fixed so they can hibernate, they would not have the diarrhœa. If they cannot hibernate, from whatever cause, they will have the diarrhœa. Why, hibernation is nature's contrivance to enable them to stay in-doors and not get diseased. Man says: "Yes, you shall stay in-doors all right, my dear little pets; but you shall have *one uniform temperature*." That renders hibernation difficult, if not impossible; because it is, no doubt, the mild spells thawing them out as it were, that rouse them from torpor, and give them a chance to eat. If, like the bear and hedgehog they took one long sleep that lasted all winter, then we would have only to find out the temperature at which they could take that single sleep most comfortably; but we have a harder problem to solve. We want to expose them sufficiently to the temperature of the outside world, so that they will be affected by its changes, and yet not freeze to death during a period of extreme cold. This is the point on which I desire bee keepers to experiment. The principle is clear enough. Bees must hibernate, if they are to winter naturally. We must find out how much exposure to the outer air they need in order to follow the hibernating instinct. and yet not be in danger of freezing to death. They must feel the cold sufficiently to get into a sleep out of which there is no waking.

SELF-REGULATING PROVISIONS.

Every where we see arrangements to guard against contingencies; but man is always putting in his meddlesome, clumsy hand to interfere with these arrangements. This is what we have been doing with our cellars, bee-houses, clamps and straw-packed hives. We have insisted upon uniform temperature, upward ventilation, escape of moisture, and framed a variety of iron rules, all unconscious that nature is ahead of us, and has made far better provision for contingencies than we can possibly do.

We are content to let the bees attend to their own ventilation during the summer, but they are not to be trusted in winter. Oh, no! Dame Nature forgot all about winter! Did she, though? There are great variations of temperature during the summer; cool and even frosty nights in June, and chilly weather in July, alternating with extreme heat. But the bees regulate things so that a cool term does not chill the brood, and when it is very hot they convert their wings into fans and get up a circulation of air at the entrance of the hive, or a lot of them cluster outside to give those within more breathing space.

A. I. Root, in his "A B C of Bee-Culture," page 276, says: "Day before yesterday, while I was walking near a hive, a bit of chaff flew out of the entrance, as if impelled by a draft of wind. 'Halloo!' said I, 'have you really become so strong as to send out a current of air for ventilation?' and I approached and held the back of my hand before the entrance. Sure enough, there was a steady, strong blast, and what astonished me more, it was so warm that it seemed almost as if it must come from an oven."

Huber found that a strong colony of bees could get up the temperature inside the hive to 86° or 88° Fahr., when it was several degrees below zero in the open air; and that "in the depth of winter they do not cease to ventilate the hive by the singular process of agitating their wings as before described." For wintering, the cardinal principle, "keep all colonies strong," only needs to be supplemented by the axiom, "plenty of pure, still air." The bees will do the rest for themselves. Mr. Root, in his A B C book, page 273, gives a diagram of arrows representing the course of the currents of air in a hive.

The bees make these currents as they find them necessary; but when they have a meagre supply of air, or there is a drought right through the hive, they are helpless. If the great pyramid of Egypt were hoisted on pillars 10 or 20 feet high, and a colony of bees were established in a cavity at its base, they would fix the air all right in the cavity by means of the ventilating and heating apparatus with which nature has furnished them. Our uniform-temperature contrivances, and our moisture absorbents, are bungling interferences with natural law. Give the bees a chance to use their own faculties, and they will be all right. They will fan all moisture out of the hive, and get up the temperature that suits them.

THE "SYMPTOMATOLOGY" OF IT.

This is a big word, but it is a correct one, and is used by a highly-esteemed correspondent, who says: "Please detail to me the symptomatology and exact condition the bees are in, how long it may last, and how they act, etc., when hibernating." Quietude, torpor or semi-torpor, and total inactivity constitute about all I know of the hibernating condition. How many of the functions of life are suspended, I will not pretend to say.

One writer affirms: "The insect breathes no longer, and has no need of a supply of air; its nutritive secretions cease; no more food is required; and it has all the external symptoms of death." This may be too strong a statement; but inasmuch as bees form a very compact cluster when they hibernate, there cannot be much respiration even in the centre of the cluster. I cannot say how long the hibernating state lasts in the case of the bees. I only know that it is broken at intervals, when food is taken.

As to "how they act," it would seem that they do not "act" at all. It is the only state of complete repose experienced by this insect, and hence, though when active, it is short-lived, this provision of nature lengthens out "the brittle thread," and enables old bees to survive until spring.

Objections.—"Since other hibernating creatures pass the winter under-ground, why are not cellars and clamps good places for bees?" Chiefly because they are impervious to changes of temperature. Bees must feed occasionally in the course of the winter, and mild weather gives them the opportunity of doing so. Moreover, animals that hibernate in the ground, have their home there all the year round, but bees are denizens of the upper air.

"Your plan for hives and stands is not practical for general honey-producing." Why not? It is less costly than bee-houses, and saves all the trouble of carrying hives in and out of winter receptacles; but I have no doubt a simpler and cheaper plan than mine will be devised. I lay no stress on the plan. It is the principle I contend for. I simply say: "Give bees a chance to hibernate, and they will winter well." To do this, I firmly believe that we must get them up off of the ground. Possibly removing the bottom-board, and raising them an inch or so above the table-high stand will answer every purpose, though I doubt that will be "too much of a good thing." Perhaps an inch opening covered with fine wire cloth will be found to temper the air sufficiently to render this method successful.

I can think of several devices, besides the particular one I have described in the Bee Journal, and intend to experiment with them. The whole thing lies in a nut-shell. In cold climates, it is the nature of bees to hibernate. We must conform our winter arrangements to this fixed habit of theirs, or pay the penalty as we have been doing.

Speedside, Ont.

For the American Bee Journal.

Shall we Breed Hybrid Bees?

J. O. SHEARMAN.

On page 469, Mr. Heddon asks a question which I fully expected would certainly attract the attention of the lovers of pure Italians; but as I have failed to see anything concerning it in the Bee Journal, I will answer the question as if addressed to me. Shall we breed hybrids? Yes; in a certain way and for certain purposes. But *call* them hybrids, and not "new strains," as some are apt to be of the very best for business purposes, while others may not. To explain: I would say, breed a choice strain of Italians with a choice strain of black or brown bees, then you are very likely to have hybrids that cannot be beaten for business, and not very cross either; but to breed hybrids together, will produce naturally cross bees, however they may be banded.

I call them different degrees of hybrids; *i. e.*, Italians and blacks bred together are of the first degree; then a queen from them would be of the second degree, etc. After they had reached the third degree, I do not like them, nor they me. So I say, do not breed hybrids indiscriminately. I think the most experienced honey-producers of to-day agree that good hybrids are best as surplus honey gatherers; and I will add, they breed faster, and are more liable to swarm under the same treatment and condition than either race in its purity.

I have noticed for several years past, that when I reared a quantity of queens and kept account of them afterwards, there would generally be one that developed some peculiar trait, or rather characteristic in a marked degree. For instance: About six years ago I had a young hybrid queen reared from a prolific hybrid queen in the midst of the swarming season, which seemed to be possessed of a strong propensity for laying, and through the fall bloom, too. (Italians seldom do that.) She kept her hive so full of brood, that there was not room enough to store the needful supply for winter.

Again, last spring I heard of a farmer who had 8 colonies of bees which had wintered through without any care at all. Now, last winter being uncommonly severe, this led me, out of curiosity, to go over there on purpose to investigate the causes, if any, of their wintering safely on the summer stands, and in single-walled hives with no protection, *i. e.*, packing. I found them as stated, and all but two were strong, and had drones when clover first bloomed. They were blacks, and mixed by hybridizing with Italians, or rather yellow hybrid drones. I was just foolish (?) enough to possess them, and so brought them home and let their black drones fly in my yard, so as to rear some hybrids with some of my best Italian queens, and that, too, when I had my apiary nearly Italianized.

Now, the point is this: One of those queens had kept three hives well supplied with brood for the last two months. I piled them up for the producing of extracted honey, and every time I took off the upper two stories, I found brood enough in each one to make a fair sized colony for winter quarters, and also honey enough to winter them on. Now (Aug. 3) they are heavy again, and out at all of the three door-ways. On the other hand, I once had a queen whose bees did not seem to care to swarm at all, their main impulse being for honey the season through. In the latter part of the season, I could hardly get eggs enough to rear some queens, by putting combs in their hives, as they would fill them with honey; but she kept her hive well stocked. They were Italians.

Now, I have a question to ask: Will those bees which I got from the farmer, in the spring, develop a strain more hardy for wintering than the average? or was the same condition accidentally overlooked that favored their coming through without protection, while all the others within 2 miles died? and nearly all the others in the same kind of hive, and put up for winter in the same way, *i. e.*, simply left on the summer stands? The mixed-hybrid's motto seems to be, in substance, the same as the dying miser's advice to his son: "Get money (honey) my son, get money (honey)! Honestly if you can, but any way get money (honey)."

New Richmond, Mich.

For the American Bee Journal.

An Enemy to Borage.

CLARENCE M. WEED.

On account of the length of its period ot blooming, and the fact of its secreting nectar during wet weather, borage justly ranks among the first of honey-producing plants. The enemy of which I wish to speak, is the caterpillar of one of our most beautiful butterflies, the Painted Lady or Thistle Butterfly (*Pyromers cardui*). This butterfly is very generally distributed over the United States, and has long been known, although not heretofore considered a serious pest on account of its rarity, and its habit of feeding on thistle and other noxious plants. But we can never tell what insect will be the next to multiply to such an extent as to become injurious.

DESCRIPTION:—There are two broods of the worms in a season, the first appearing in May or June, and the second in August. The small blackish caterpillars are covered with branching spines, a portion of which on the back are yellow, the rest black. When full grown, they are about an inch and a half long, and black with a greenish yellow line on each side, above which is a less distinct brown line. The head is black, and on each ring of the body are seven many-branched spines, yellow tipped with black. They protect themselves by spinning a white silken web by which they draw two leaves or the sides of one leaf together, thus forming a tent. The chrysalids vary a good deal, but are usually of a golden brown color with slate-colored markings.

In about ten days after becoming a chrysalis, the butterfly emerges; the latter expands about 2½ inches. The upper surface of the wings are a pinkish red near the body, and black toward the outside. In the outer angle of the front wings, are five irregular white spots. On the under surface of each posterior ring is a row of five, colored, circular spots. Prof. Cook informs me that he has never seen these butterflies so common as they are at the present season. Besides borage, the caterpillars have appeared on hollyhocks in many parts of the State.

REMEDIES:—Pyrethrum will probably be found effective in destroying them, if applied with sufficient force to penetrate the web. It would not be advisable to apply the deadly arsenical compounds when the plants are blooming, but at other times this method would doubtless be found practicable.

Lansing, Mich.

For the American Bee Journal.

Bees as Comb Builders.

GEO. H. HOYLE.

The positions taken by some of our leading bee-keepers, and the results of their experiments being so different, I hope, by the aid of others, to find wherein the difference lies. I will first state my experience. On May 3, I hived a swarm of hybrid bees in a Simplicity hive, and gave them 10 half-sheets of comb foundation. A week afterward I put on another story with 10 half-sheets of foundation, and 2 weeks after that I gave them a third story and 10 empty frames with wax comb-guides. These frames I placed alternately between the others, to insure straight combs.

When I commenced extracting, I gave them 4 more half-sheets of foundation, and two more empty frames. The result was that I got 24 good combs from half-sheets of foundation, and 12 from empty frames with wax comb-guides. I have extracted 94 pounds of honey from them, and there is yet upwards of 20 pounds in the hive.

The queen of the above mentioned bees, is an Italian, and was fertilized by a black or German drone. I tried to make one of my Italian colonies build comb in the same manner, and when I gave them half-sheets of foundation, they would draw it out, fill it with honey, and seal it, but they would add very little comb to it. When I extracted the honey, I gave them good combs, and gave the half-combs to hybrids to build on. I tried them with wax comb-guides, and it did not work at all. After 5 or 6 days I took the frames out, and they had started a piece of comb on one frame. What little they had built, you could plainly see, was of old wax and had been taken from some other comb. The Italians and hybrids rank about the same, as honey-gatherers.

Mr. Doolittle says that he can have combs built cheaper than he could buy comb foundation to put into the same number of frames. Now, Mr. D. is a successful bee-keeper of excellent judgment, which his articles in the bee-papers prove, and it is not likely that he is very far wrong. Some bee-keepers say, "How can Mr. Doolittle know, as he never used 10 pounds of foundation in his life?" I will venture to say that Mr. D. is very familiar with the results of other apiaries in which foundation is used.

If Mr. Doolittle would tell us what kind of bees he had, and the bee-keepers who have written in favor of, as well as those who have written adverse to, his plan of having combs built, would do the same, I think it would give some light on the subject.

Mr. H. V. Train, on page 278, writes under the head of "Italians vs. Brown Bees." The object of the article is to show how badly his brown bees outdid his Italians. Now we, who use foundation and extractors, all know that the Italians are as good honey-gatherers as has yet been discovered. Please tell us, Mr. Train, if you used foundation at the time.

Morgan, Texas.

Philadelphia Times.

Philadelphia Bee-Keepers' Picnic.

In a beautiful glen surrounded by woodlands and close to the rippling Wissahickon, stands a quaint old-fashioned farmstead. Here were congregated on July 26, on a space cleared around the house, some thirty ladies and gentlemen, whose conversation was entirely devoted to the relative merits of various kinds of bees and their culture, while one of their number introduced them to his large colony of honey-collectors. It was the special summer meeting of the Philadelphia Bee-Keepers' Association. The farm was Vice-President Todd's bee and poultry farm at Kitchen's Lane, Germantown. He is from the old country and has been in America only a few years, but has already identified himself with apiarian interests in this country. In his yard are arranged more than eighty hives, some of them three stories in height.

"Now, ladies and gentlemen," said Mr. Todd, "if you will step this way we will look into some of the hives. Put on your veils if you have them. I do not think it will be necessary, but you may be nervous, and if you should be rough with the bees, they are apt to get angry."

Mr. Todd, without any covering to face or hands, lifted the lids of the hives, took out the combs swarming with bees, handled the little creatures, allowed them to crawl over him and showed no trepidation of any kind.

"Do they never sting you?" he was asked. "Very seldom. Sometimes when honey runs short and they are hungry, they are not so quiet and amiable; but they are exceptionally good-humored to-day. You see, I blow a little smoke into the hive;

that frightens them; they gorge themselves with honey in their terror and they are thus rendered quiet and comparatively harmless. Ah, there is the queen," he continued, pointing to a bee much longer than the rest and with smaller wings. "See, there are some eggs. It is all right. She is fertilized." At this statement there was considerable excitement among the enthusiasts assembled.

The apiarist took two frames of comb into the house and showed how the honey was extracted. He first shaved the covering from the cells and then placed the combs into a kind of churn, which he turned very rapidly. The honey was all ejected into the receptacle, and the combs, once more empty, were ready to be again filled by the industrious little collectors. Mr. Todd then took his visitors to see his three-acre sun-flower plantation.

"This is an experiment," he said. "I have heard that in Spain and Portugal the green leaves of the sunflower are used as fodder for the cattle. I have tried it with perfect success. My bees will obtain an immense supply of honey from the flowers, and the seed is good feed for the poultry. I shall in that way obtain three crops from my outlay. It is also possible that out of my abundance of blooms I may send some to market for sale, as they are a beautiful flower; and I may also make the experiment of making bread of the seed-flour. That is done in Spain, where the sunflower receives the title of 'the gift of heaven.'"

The party thence returned to the bee-village and resumed the inspection of the tenements. They were shown colonies of Italian bees, black bees and hybrids. The various qualities of their honey-storing abilities were descanted upon and the safety of handling the pure-bred, civilized Italians was extolled; while the fierce nature of the native black bee was vigorously proclaimed. Mr. Todd exhibited a thorough-bred Italian queen-bee and her young brood. This queen was sent over from Italy in a little wire cage, supplied with saccharine provision for her long ocean voyage, on two little bits of sponge. She is very healthy and is rearing a prosperous young colony in her new quarters with all the maternal energy and pride of which she is capable.

Dr. R. H. Townsend, president of the Philadelphia Bee-Keepers' Association, called a meeting on the hill above the house, under the shade of some fine chestnut trees, and spoke of the increasing interest which is felt in apiculture. He bemoaned the fact that more interest in this useful branch of productive art is not taken in the colleges and schools of learning in this country, saying that he thought that in every college there should be a professor of apiculture.

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☞ The Southern Indiana Bee-Keepers' Association will meet at Madison, Ind., on Sept. 4, 1884, at the Fair Grounds. DR. FIRTH, *Sec.*

For the American Bee Journal.

Introducing Queens—My experience.

ABEL GRESH.

Quite recently one of my colonies cast a swarm (the smallest out of five), and as usual I moved the old hive to a new stand. In due time a young queen was hatched, and she destroyed all the remaining cells. In about a week after the queen hatched, I noticed that the new colony was carrying out bees, to a large extent, so I began to investigate, when I found that those which were carried out, were of a peculiar shape and color. The colony was Italian, having purchased the mother last season, as a tested queen. The workers are very fairly marked, while those carried out are short and chubby looking, having one fair yellow band, and instead of the two hindmost bands, they are black, and some of them very shiny. I should say at least one thousand such bees were carried out alive. Some of them came running out, and appeared as if stung. They acted as if crazy, running over the sawdust floor without any aim, until they died. I looked for the young queen, and could not find her; so I continued to look 3 or 4 days (thinking that possibly I had overlooked her before), until I was convinced that the colony was queenless.

Having extra queens in nuclei, I determined to introduce one, and luckily (as I thought) along came the BEE JOURNAL of July 16, 1884; and on page 456 appeared an article from the pen of S. Simmins, on an easy way of introducing queens direct to a colony. I studied the method to suit my circumstances (from a nucleus to a colony), and the next morning I determined to try the new plan.

Luckily my old tutor in the business happened to call on me, and together we took a final search for a queen in the hive. We found none, but we did find plenty of newly-laid eggs, and on closer examination pronounced them the work of fertile workers. We closed the hive and returned to Simmins' article, and found that we still were right, and that the new method was quite applicable to my case. So we took the frame with the queen and adhering bees, to the colony, removed a comb, put the one from the nucleus in its place, closed the hive with confidence, and looked after some other colony. In 15 minutes we noticed the bees busy carrying out dead bees, and the next morning I found my beautiful young queen lying in front of the hive, dead.

I do not think one of the introduced bees were spared. I was then in a frame of mind to commune a little with S. Simmins, and also to teach my fertile-worker crew a lesson.

I read Prof. Cook's way of getting rid of the latter (as he is generally sound). I then carried the hive 2 or 3 rods away, thoroughly smoked the bees, took out all the frames and set them around, brushed the remaining bees out of the hive, then carried it to its old stand. I then took two combs out of a nucleus, with the queen and bees adhering to it, and put it in the middle of the hive. I then brushed every bee from the combs to the ground, and placed each one by the side of the nucleus combs, until the hive was full, when I closed it, and let the bees get back as best they could. The result is satisfactory; no bees killed, and the colony is working actively.

Can some one tell what causes the small, shiny, imperfect bee that was being carried out? May not the presence of fertile workers have some connection with them, or *vice versa?*

In regard to Mr. Simmins' article. I would caution readers of the BEE JOURNAL not to place too much confidence in it, as it is one of the rules mentioned by Mr. Doolittle, which do not apply as do the rules of arithmetic. I am inclined to believe that the old queen is at fault, and unless I am convinced of the contrary, I shall not spare her. Bees are doing fairly well here this season.

Weedville, Pa., July 29, 1884.

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For the American Bee Journal.

Profitable Use of Comb Foundation.

W. M. WOODWARD.

That comb foundation is one of the most valuable inventions of modern bee-keeping, I supposed was universally admitted; but I see that even so judicious a bee-keeper as Mr. Doolittle not only doubts, but decidedly opposes its use. How he could perform any decisive experiments upon less than 10 pounds of it, I fail to see. I used three times 10 pounds to satisfy my own mind, and found that proper management made it pay me; not only to use it, but to buy a machine and make my own. (I am Mr. D.'s poor man, to a dot.)

My experiments proved to me that, with the ordinary management, from 50 to 75 pounds of honey can be realized from every prime swarm, above what they will naturally produce without its use.

The point where I conceive Mr. D. in error, is in his estimate of the necessary wax secreted by bees while gathering honey. I want to ask him to examine his colonies which are run for extracted honey, where, if I mistake not, he will learn that they are able to make good use of all the wax secreted. If so, this proves that the secretion of wax is not necessary, but occurs for want of room to deposit the honey immediately on returning to the hive, and before it becomes digested. Comb foundation is certainly the remedy when rightly used.

Its profitable use then turns upon these points: 1. That there should be an abundance of it to give all the surface the bees will cover. 2. That it should be as light in grade as will admit of being drawn to storing and brooding depth, thus compelling the bees to store in a large extent of surface at the start. 3. That all space, save just enough to hold the brood as fast as it can be produced, must be filled with sections. This last point I think Mr. D. will readily admit, as it grows out of his own system of management.

I have my hives so constructed, this season, that I hive bees on 3 frames; which has so far been sufficient for 10 to 15 days, when 3 more are added, being just enough to fill the space of one side-case of sections.

Mr. D. asks those who have tried and favor its use, *i. e.*, have made it pay, to pass his article by as though he had never written it. If by this he hopes to gain a mark, we protest that he is giving general advice which is suited only to local or peculiar conditions; but like his new method of introducing queens, will not always work with mathematical precision.

Where swarming occurs in a very moderate honey-flow, and no surplus is likely to be had, it will pay any bee-keeper to try working the bees at comb building for profit, even if he finds it necessary to render the combs into wax as fast as made. But in a vast majority of cases, I think bees swarm most during a paying surplus yield. Under such circumstances foundation is certainly a great boom.

Mr. D.'s objection on account of thickness of foundation, in his last article, is entirely superfluous, as he himself can make his own foundation "thinner" than any bees will make it. At least I can.

Custer, Ill.

Prairie Farmer.

A Timely Chat About Bees.

MRS. L. HARRISON.

While visiting an apiary yesterday, I was impressed with the idea that bee-keepers are born, not made; i. e., that there must be a natural adaptation for the business, in order to succeed. The proprietor of this apiary, without any protection, or aid in the way of smoke, opened hives, and pointed out the queen, without exciting the bees in the least; indeed they did not appear to know that they were disturbed, and this, too, in a time of scarcity. The cover of the hive was removed, and the frames lifted, without any jar or noise. I sometimes think that the odor of some persons, or their magnetism, excites bees at a furious rate. The frames in this apiary had no wooden projections to hang by, nails being driven in for this purpose, consequently there was no prying up.

This apiary of 140 colonies is located in Putnam Co., Ill., and up to date, July 26, only about 100 lbs. of surplus honey have been removed. At this time last year, 7,000 lbs. had been taken. There was very little honey-dew in this locality, the small quantity lasting only a day or two. The maples are in a thrifty condition, with no appearance of bark-lice.

The honey crop, with the exception of a few localities, is a partial failure. The honey secured is in many instances contaminated with honey-dew, and but very little of it will be first class. The electric conditions for the secretion of nectar from white clover, have been deficient, and although the bloom was abundant, but little has been secured. Hot nights—good corn-growing weather—is the desideratum. The prospect is good generally, for a full autumn flow of honey; and those having their dishes right side up, will catch it. Hives that are full of bees will be the ones to pay their rent promptly. Those desiring to winter their bees well, must look after them now, and see that each colony has a young, vigorous queen.

For the American Bee Journal.

"Honor to Whom Honor is Due."

J. E. POND, JR.

It is too bad to rob, or attempt to rob another of that to which he is honestly and justly entitled, not only of filthy lucre, but of any honor that may come from being the originator of some new idea. That Mr. Heddon is justly entitled to all the honor that belongs to the origination of the "pollen theory," no one knows better than myself, from the fact that I have been fighting him on this question for nearly three years. Mr. Heddon, however, does not yet claim that he has proved the theory true. He simply says he believes it to be so, and offers such evidence as he has at hand in proof thereof, leaving it to the public to judge whether such evidence is sufficiently strong to be taken as proof. Mr. Fradenburg is more than a year behind Mr. H. in the matter, and the evidence that he offers is not nearly as strong as that of Mr. H. I do not think either of them have struck the right key yet, but the facts related by Mr. H. go far in support of the theory, while those of Mr. F. might as well be used on the one side as the other.

Foxboro, Mass.

For the American Bee Journal.

Prevention of After-Swarms.

A. A. DECKER.

On page 126, BEE JOURNAL for 1883, Mr. Heddon gives his method of preventing after-swarms, which is summed up as follows: Set the new colony by the side of the old one, and in 6 or 7 days remove the old one to a new stand when the most of the workers are away in the fields; thereby giving nearly all of the workers that are old enough to gather honey, to the new colony. This will prevent after-swarms, without a doubt; but what I do not like about this plan is, that we take about as many bees from the old colony as a second swarm would require. The old colony needs these bees, the first swarm does not. Again, will the new colony accept the workers from the old one, after being separated for 6 or 7 days, even if laden with honey? My bees certainly will not.

I believe any other colony in the yard will take them in just as soon as they, as they have become strangers. Another objection is, if we give any help, either in bees or foundation, to early swarms, they will in a good season often cast swarms in the midst of our best honey flow (basswood), regardless of all the sections filled with the nicest of thin foundation.

Can it be possible that bees act so differently in different localities? I believe, with Mr. Heddon, that a colony and its increase will store more honey than one that does not swarm. All practical bee keepers know that there is no profit or pleasure in small after-swarms; and in this locality to get the best results, *i. e.*, surplus honey from the old colony, all the bees that are left when the first swarms leave, should stay in the old hive during the remainder of the season. The best way to accomplish this, I believe, is to introduce a queen into the old colony, on the day the first swarm issues, either a virgin or a fertile queen will do. You can smoke them in at the entrance. There are few old workers left in the hive, and no guards over the queen-cells. The queen, when introduced, makes it her first business to destroy these cells, and then everything is lovely.

The gain in time, to the colony, in getting a queen in the midst of the honey season, 8 days at the least, will pay all expenses of rearing or buying the queens in these days of progress and queen nurseries. That this plan will generally prove successful, there is not a doubt, for it has been thoroughly tested. I hope to hear from Mr. Heddon and others on this subject.

Boyceville, Wis., Aug. 1, 1884.

Bee-Culture in Texas.

An Exchange contains the following: "Bees are said to be pioneers of civilization. The early colonists of Texas found bees in all parts of the country; and on the frontier they still abound, having formed colonies in hollow trees, caves, and crevices in the rocks. In one instance it is reported that a prolific swarm took possession of the vacant space between the ceiling and weather-boarding of a house in the far West, and furnished a large family with an abundance of honey. Until recently, comparatively little attention has been given to bee-culture. Within the past few years, some apiarists have been adopting hives with movable frames, using honey extractors, and importing queens and Italianizing their colonies. A special act of the Legislature exempts bees, and the materials employed in the manufacture of hives and the saving of honey, from taxation; and while there are hog-laws and sheep-laws, and laws prohibiting other animals from running at large, there is no law limiting the range of bees. They may forage just where they can find honey-producing shrubs and flowers. Of these flowers there is a great variety and an inexhaustible abundance on our boundless prairies, and in our fertile bottom-lands. Perhaps the best and most widely diffused of the honey-producing plants is the horse-mint. This is pronounced equal to the white clover of more Northern latitudes."

SELECTIONS FROM OUR LETTER BOX

A Good Investment.

I commenced the season by buying 25 colonies of bees in Cottage hives, transferred them to Langstroth frames, and got on an average of 5⅓ combs to the hive, after they were transferred. Up to this time, I have taken 1,500 pounds of extracted honey, and have sold very nearly the whole crop at 15 cents per pound. I hired a market gardener, who was good at peddling, at $2 per day, to sell honey for me, and I found that it was a good investment. B. F. BALDWIN.

Marion, Ind., Aug. 3, 1884.

Bees Not Working.

Bees in and around this city have done but little for 2 weeks; but 4 miles below the city, on the Island, they are storing honey rapidly. Mr. T. R. Sawyer and myself are now located on the Iowa City road, one mile from the Court House. He has 100 colonies, and I have 25. Our prospects, until 2 weeks ago, were as good as they had been up to that time 2 years before, when, in the fall, he received from 45 colonies, spring count, 7,300 pounds of mostly comb honey in 1-pound and 1½-pound sections.

W. T. KIRK.

Muscatine, Iowa, Aug. 1, 1884.

Poorest Season Since 1869.

With us, this is the poorest season for honey since 1869. We had cold, windy, cloudy weather when there was blossoms, and good weather when our honey-producing flowers were gone. G. M. DOOLITTLE.

Borodino, N. Y., July 31, 1884.

Main Honey Season Past.

The main honey season has past and I have no bonanza to boast of. Our failures are bound to advance the price of honey. We must admit that the freaks of nature are in advance of the skill of man. In the first part of the season, apple bloom was profuse. Clover bloomed May 20, and lasted till July 10; but there was very little nectar gathered from that source. The so-called honey dew, or nectar from the leaves of trees, was abundant from the last of May till June 30; and my 54 colonies from all those sources filled all the hives with nice capped honey and bees. On July 7, I took off 600 lbs. of comb honey and extracted about 65 lbs., and I saw signs which led me to leave the honey and bees alone for a short time and see the result; and I now can say that the 54 colonies were once richer this season than they are to-day. To-day I find the heart's-ease nearly all blasted in the bud. It is a settled fact that the bees are now consuming more honey in rearing brood than they gather each day. My queens are breeding in haste and consuming their laid-up store. My buckwheat is in bloom and the bees sip every bloom clean in less than two hours each day. I can see no source yet from which I am likely to get any fall honey. My 52 old colonies swarmed 92 times, and every one returned to the parent colony, because the wings of the queens were clipped; consequently, I never lost a queen and have no swarmed-to-death colonies. I did not have to feed any last spring, and my hives are full of bees and honey; but I do not want to rob them so they will suffer, for the mere purpose of obtaining a large profit at the expense of the blessed bees' lives. I could, to-day, take 50 lbs. from each hive, but I prefer to keep my bees and honey in the same little house until I see that all danger is past; and then deal honestly with the little honey-gatherers, for they are honest in their dealings. They live, labor, store and die, that people may live and be happy. The Italian bees are the best bees to gather honey early and late. R. M. OSBORN.

Kane, Ill., July 24, 1884.

Swarm Separators.

In reply to Mr. Kinsel's questions on page 411, in regard to swarm separators, I would say: The division-boards do extend to the bottom-boards, and the cover rests on the division-boards so that the bees cannot enter from one division to the other. On the top the frames are ⅜ of an inch lower than the division-boards. In separating, the bees pass through the entrance in the bottom of the division-boards, or through 1½-inch augur-holes bored 4 inches from the tops of the division-boards. I gave a description of the swarm separator as published on page 171 of the BEE JOURNAL for 1881. Although the honey interest looked rather gloomy, early in the spring, we are now having a second bloom with an abundant yield of nectar. The report from Napa county promises a good yield. As I am not quite ready for extracting, I have to tier up my hives 3 or 4 stories. I use the Simplicity-Langstroth hive, and will commence extracting next week. I have been in the bee-business in California during the past 6 years, and for bloom, this season exceeds all former ones. The hills are a perfect flower-garden. Bees are working on the sage, which is something unusual for this time of the year. JNO. L. SECOR.

Monterey, Cal., July 23, 1884.

A Good Honey Flow.

The clover harvest was a poor one here, but we had a good flow of honey for about a week from June 12 to the 20. My bees then had the swarming fever till July 1. I had 45 swarms from 50 colonies. As my frames were all one size, I had no trouble to keep the increase down to 45, by taking out the brood-frames and returning the swarm. I returned some 18 swarms in that way. Those frames of brood I would give to the other new colonies, which would be a great help to them, and would keep all strong. On July 8, basswood bloomed, and up to this time I did not have 200 pounds of comb honey finished. The bees now began to work as I never saw them work before. They were so heavily loaded that they dropped by the thousands all over the apiary, and I never before saw sections filled up so fast. I am using the two-pound section. I was able to give them room as fast as they needed it, and in two weeks time some of my colonies had 42 two-pound sections nearly all sealed over. I had one strong colony which I overlooked in tiering up, and to my surprise they had the whole brood-chamber filled with honey clear down to the ground, a distance of 8 inches. I then smoked the bees out and extracted the honey. The combs were built as straight as a board, and all was worker comb, so I fit them into frames. I have 5 strong nuclei, which I am now building up to full colonies, to make my number an even 80. I have now 3,000 pounds of capped comb honey, and about 1,000 pounds of uncapped. I expect to get most of the latter capped yet, as the pasture fields are again white with clover. Bee-keepers here are forcing the honey on the market at 10 and 12 cents per pound, but I am still holding my crop back for 15 cents per pound, and so far I have sold but 200 pounds at that price.

H. T. HARTMAN.

Freeport, Ill., July 28, 1884.

Not More than Half a Crop.

I have not yet seen any reports of the honey crop from this part of Kentucky. The spring was wet and cold until the middle of June. We have not more than half a crop of honey this season. I had 52 colonies, and increased them to 75, mostly by division. I have taken about 3,000 pounds of honey, the most of it being extracted. My bees are in good condition. WM. G. GOSNEY.

De Mossville, Ky., Aug. 3, 1884.

Good Honey Season.

I commenced with 9 colonies of bees, in the spring, and at this time I have 26, all in the Golden bee hive. The honey season has been good here. I have sold all my honey at 16⅔ cents per pound, in my home market. I have the Syrian bees, which are gentle and easy to handle, and I manage them without any smoke.

JESSE LOVELACE.

London, Ky., Aug. 5, 1884.

Discouraged but Determined.

I have been waiting patiently to make a good report, and here is what I have to say: I started with 148 colonies on May 1, 1884, and now have 300 colonies. They are mostly strong and ready for the fall crop, if there should happen to be one. Up to this time I have taken only about 200 pounds of honey—unfavorable weather being the cause of the failure of the white clover. Basswood was an entire failure. I, alone, have done all but one day's work in my apiary this season. I am looking for a good fall crop, as goldenrod looks well. Just now I believe I would be satisfied with enough honey with which to winter my bees, and take my share next time. I have 2,000 lbs. of old honey which I can feed, if necessary. Early in the spring I reported that bees were wintering finely. The colonies in two cellars wintered well, while those in the other two, with little or no ventilation, lost about 90 per cent., thus making my spring and winter losses 129 colonies. Taking the whole season through (with me), it has been the most discouraging one I ever saw; nevertheless my boat is cut loose from shore, and I intend, in the near future, to land it well ladened with both bees and honey. WM. LOSSING.

Hokah, Minn., Aug. 2, 1884.

Large Crop of Basswood Honey.

I notice in the last issue of the BEE JOURNAL, that basswood has been a failure in many localities; but here it has yielded a large crop of excellent honey. I am running two apiaries for comb honey, and another one of 45 colonies entirely for extracted honey; and they have already yielded over 100 pounds of white honey per colony. FRANK MCNAY.

Mauston, Wis., Aug. 1, 1884.

More Honey than for three years.

With us the white clover and basswood honey season is over. I have not yet taken the honey from the hives, but think that I will have more this year than all of the honey of the last three years put together. Recent heavy showers gives the buckwheat season a promising outlook at present. Natural swarming was very light—on an average only about one swarm in 10 colonies. H. S. SEE.

Geneva, Pa., July 31, 1884.

A Long Hive.

On page 164, W. H. S. Grout, of Kennedy, N. Y., says he has had 13 years experience producing extracted honey, and says he uses a 40-inch hive, etc. I wish he would detail his method of managing such a long hive, and state why he prefers it to the 2-story plan. TURNER BUSWELL.

Solon, Maine.

Wintering Bees—A Question.

It is a fact that an exceedingly strong colony of bees will, in severely cold weather, contract themselves into a cluster of 7 inches or less in each diameter. Such being the case, and I know it to be so by actual tests, can any one give me, or the fraternity at large, a logical and scientific reason why such a colony should winter with greater safety on a set of frames from 12 to 15 inches deep, than on a set which are only 9½ inches deep? Much discussion has been already made as to the relative safety of deep and shallow frames for wintering, but in none of the arguments made, have I seen anything touching on this point. It strikes me though, that the point is a vital one, and one that should be cleared up in a scientific manner. In answer to the above, I do not care for theories, but I do desire an answer based on the true relations of heat and cold, and to the keeping up of an equable temperature artificially much higher than that with which we are surrounded.

Foxboro, Mass. J. E. POND, JR.

Authorship of the Pollen Theory.

Mr. A. A. Fradenburg, who lives a few miles from me, on the Tuscarawas river, has been very unfortunate in wintering, and theorized extensively as to the cause. I was much surprised to note his claim of priority of authorship of the pollen theory in a recent number of the BEE JOURNAL. The records will show, I think, that to Mr. J. M. Shuck belongs the honor of first conceiving that pollen is a factor in the causation of bee-diarrhœa. (See BEE JOURNAL, Vol. XVII, page 165.) His experiments go back to 1875. But to Mr. James Heddon belongs the honor of elucidating the pollen theory, the full history of which may be read in the latter numbers of that very valuable and first edition of the Weekly BEE JOURNAL for 1881. Mr. Heddon also made the first application of the theory. This is cheerfully conceded; and I feel certain that growing out of an amicable discussion of his theory, we shall, undoubtedly, come to the facts, ere long, as to the causes of bee-diarrhœa, and a complete solution of the problem of wintering bees.

G. L. TINKER, M. D.

New Philadelphia, Ohio.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Removing Surplus Honey.

Will Mr. Heddon please answer the following question:

When do you remove the surplus honey from the cases? As soon as it is capped, or do you leave all the cases on until the end of the season?

Myersville, Md. W. R. YOUNG.

ANSWER.—Always remove a case as soon as it is finished. If in that part of the season when the work is going on slowly, we often remove a case when some of the sections are still unfinished, and from 6 or 8 cases make up one of all unfinished combs and return it at once to the bees to be finished.

Weight of Extracted Honey.

On page 470, Mr. B. F. Carroll says, "The honey taken is very fine, weighing 12¼ pounds per gallon?" Which leads me to ask:

1. What is the weight, per gallon, of extracted honey?

2. Suppose I have a lot of thin extracted honey, to what weight, per gallon, should it be evaporated before it will be safe or fit to run into containers for sale?

3. How light weight, per gallon, will keep safely in sealed pails or fruit jars?

4. How heavy, per gallon, ought it to be when properly cured for market?

5. What do dealers in honey consider the proper weight, per gallon, of extracted honey?

6. Can you not give, in some article, the best method of curing unripe extracted honey on large and small scales, so as to suit the wants of all classes? TURNER BUSWELL.

Solon, Maine.

ANSWERS.—1. A very good article of extracted honey, that is, very well ripened, will weigh 12 pounds per gallon. Mr. Carroll's honey, which weighed 12¼ pounds, was, no doubt, very thick.

2. Not much short of 12 pounds per gallon.

3. That depends upon what is meant by "safely." Honey of any consistency rarely keeps its flavor as nicely in any other place as in the comb. Even at 12 pounds per gallon, honey will usually go far enough toward fermentation to take on a twang not often found with comb honey. If you wish your honey to remain of the smooth, oily flavor it contained when extracted from sealed combs, it should not fall short of 12 pounds per gallon, and 12½ is preferable.

4. I consider 12 pounds per gallon marketable honey for sauce purposes.

5. Dealers in honey, as a class, do not know as much about weights per gallon as producers do. Many of them buy honey for mechanical and cooking purposes.

6. In few words I will say that I consider leaving the honey in the combs until it is ripened, as the best way to get it in that condition, for those who produce it on a small scale. For those who produce it on a large scale, I think the laws of nature afford a cheaper method; but, as yet, I know of none sufficiently formulated that it is in use by bee-keepers in general. Our California bee-keepers are best posted regarding this matter.

Convention Notices.

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting on the third Tuesday in August, at Leroy Highbarger's, near Adaline, Ogle County, Ill.

J. STEWART, *Sec.*

☞ The Kentucky Bee-Keepers' Convention meets in Louisville, Ky., during the opening of the Exposition (day not fixed). N. P. ALLEN, *Sec.*

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ In reply to many correspondents let us say that we take any kind of postage stamps as money, but coins should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 25
" 200 colonies	(420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Convention Hand-Book.

tis a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, Wash. Ter.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs: —Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with $10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

◆

Advertisers' Opinions.

My advertisement in the BEE JOURNAL, has brought me over 400 responses. DR. G. L. TINKER.
New Philadelphia, O.

The queen business is *rushing*, and we think the BEE JOURNAL deserves much credit as an advertising medium.
E. A. THOMAS & Co.
Colerain, Mass.

Having advertised in the AMERICAN BEE JOURNAL quite extensively for the past two years, I would say (without solicitation) that it has sold more queens for me than any other three periodicals I have ever tried.

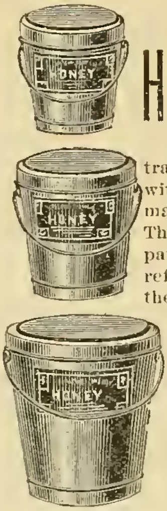
My bees are in fine condition this spring. I have lost but 4 out of 182 colonies. The outlook is fine for a good season. L. J. DIEHL.
Butler, Ind.

The BEE JOURNAL does its advertising wonderfully well. It brought to me responses from Canada to the Gulf of Mexico, and from the Alleghanies to the Rocky Mountains.
WM. M. ROGERS.
Shelbyville, Ky.

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published SEMI-MONTHLY, at Seven Shillings per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**
LONDON, ENGLAND.

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.



NEW
HONEY PAILS

The accompanying illustrations show a nest of pails with the sides tapering, for marketing extracted honey. The covers are deep and the pails are made with special reference to filling them for the retail honey-trade. They are made in a superior manner and are quite attractive in appearance, when filled and nicely labeled.

	4 lb.	7 lb.	13 lb.
Per doz.	$1.25	$1.60	$2.00
Per 100	8.00	10.00	14.50

A. H. NEWMAN,
CHICAGO - - ILL.

W. Z. HUTCHINSON,
Rogersville, Genesee Co., Mich.,
Is now making a specialty of rearing fine Italian queens. All queens bred from the purest and best of mothers, and the cells built in full colonies. Single queen, $1; 6 for $5; 12 or more 75 cents each. Tested queens, $1.50 each. Make money orders payable at Flint, Mich. 31Atf

Notice This!

After Aug. 20, I will send by return mail a beautiful tested Syrian or Italian Queen, and one of my combined Drone and Queen Traps, or a copy of the Bee-Keepers' Handy Book, on receipt of $2.00; without book or trap, $1.50 each. Warranted Queens, $1.00 each; 6 for $5.50; 12 for $10. Select tested, $3.00. Safe arrival guaranteed, by mail. **HENRY ALLEY,**
33Atf WENHAM, MASS.

BIND YOUR JOURNALS
AND KEEP THEM
NEAT and CLEAN.

The Emerson Binder
IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal.............50c.
For Weekly Bee Journal.............75c.

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, Chicago, Ill.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.
D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM.
MAYSVILLE, KY.
37A1y

Vandervort Comb Fdn. Mills,
Send for Samples & Reduced Price-List.
ABtf J. VANDERVORT, Laceyville, Pa.

Deutsche Buecher,
Ueber Bienenzucht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände —Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin —Füttern — Schwärmen — Ableger—Verſetzen—Italieniſiren—Zuſetzer von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchrieben iſt. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieſes enthält eine klare darſtellung über Bienen und Honig des Alterthums; die Beſchaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formküchelchen, Puddings, Schaumkonfect, Weine, u.ſ.w zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es iſt für den Conſumenten beſtimmt, und ſollte vieltauſendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und ſeine Krankheiten—Von B. J. Kendall, M. D., enthaltend ein alphabetiſch geordnetes Verzeichniſs der verſchiedenen Pferdekrankheiten, ſammt den Urſachen, Symptomen und der richtigen Behandlung derſelben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN.
925 West Madison St. CHICAGO, ILL.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK C ., Portland, Me. 4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

LOCAL REPORTERS WANTED.

We want an agent and local reporter in every community to represent **City and Country,** and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A18t

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11Atf

BEESWAX.

I pay **28c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

ALFRED H. NEWMAN,
923 West Madison St., CHICAGO, ILL.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Syrian-Albino Queens!

My new Strain **AHEAD** of all. They build beautiful, straight Combs, **without Separators**, and are **UNEXCELLED** as workers. Reared by Alley's method.

Select-Tested, to breed from	$3.00
Untested	$1.50

Address, **DR. G. L. TINKER,**
30Atf New Philadelphia, Ohio.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Prices Reduced.

Owing to a decline in the price of Beeswax there will, hereafter, be a reduction of

2 cents per pound

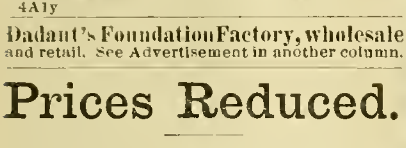
on all orders for Comb Foundation,

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ills.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.
Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.

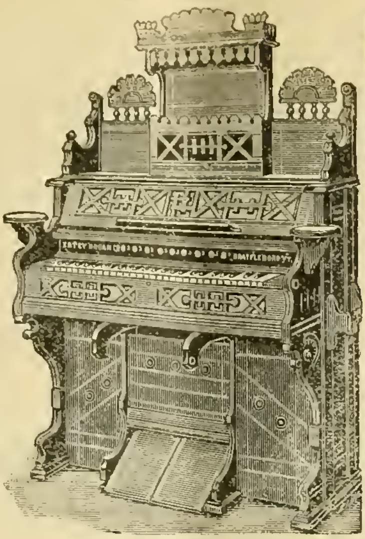
SYSTEMATIC AND CONVENIENT.



DAVIS' PATENT HONEY CARRIAGE,
REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only............$18.00.

For sale by **ALFRED H. NEWMAN,**
923 West Madison Street, CHICAGO, ILL.



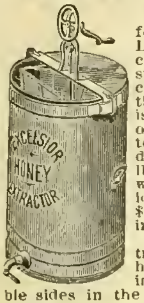
BUY AN ESTEY ORGAN

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,
188 and 190 State St., CHICAGO.

EXCELSIOR

HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13 inches	.........$8 00
For 2 Langstroth "	10x18 "	.... 8 00
For 3 " "	10x18 "	.........10 00
For 4 " "	10x18 "	.........14 00
For 2 frames of any size,	13x20 "	.........12 00
For 3 " "	13x20 "	.........12 00
For 4 " "	13x20 "	.........16 00

ALFRED H. NEWMAN,

923 West Madison Street,
CHICAGO, - - ILLINOIS.

---

65 *ENGRAVINGS.*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

CHEAP. I offer **100 COLONIES** of strong, healthy **BEES** for sale very cheap. Send for particulars to
32A2t H. J. SCHROCK, Goshen, Ind.

DR. FOOTE'S

HAND BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause &
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

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ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street Chicago, Ill.

1868. 1884.

HEDDON'S COLUMN.

BEST GIVEN COMB FOUNDATION.

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

HEDDON'S LANGSTROTH HIVE.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey..	$3.00
(The above will contain two cases complete with sections).	
The above Hive complete for extracted honey........................	..$3.00
The above Hive complete for both in one	4.50
One Hive in the flat..............................	2.00
Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from...	$ 3 00
Untested	1 25
Untested, after July 1st....	1 00
Untested, (per doz.) after July 1st.............	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition OF BEES and HONEY, OR THE Management of an Apiary for Pleasure and Profit; by

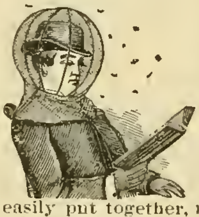
THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

A NEW BEE-VEIL.



ere are five cross united by a rivet ugh their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

Fo further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid . ...in May and June, each....$	.50
Italian—untested—not warranted, in May and June, each..................................	1.00
Italian—warranted, May and June, each.....	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids........................	7.00
Full colonies of Italians........................	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

BEE-KEEPERS, before ordering your

APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t **E. KRETCHMER, Coburg, Iowa.**

50 TONS OF COMB HONEY WANTED.

Believing it to be advantageous to both seller and buyer to deal with the same parties year after year, we have for several years bought the entire honey crop of many bee-keepers. In view of our increasing trade, we wish to add to our list of producers, the names of a few more reliable men whose honey crop is from one to ten or more tons yearly. Through the actions of certain bee-keepers, the trade now demands mostly one-pound sections. We pay **spot cash** at railroad station for what we buy. Those desirous of becoming acquainted with such dealers, will state how much honey they have of each size section. How much of each quality. How soon the whole or part of it can be in shipping order. Name lowest cash price, and say how much more is in your locality. If answer is favorable, we will call on you. York State, Michigan, or Vermont preferred. Address,

F. I. SAGE & SON, Wethersfield, Conn.
31A4t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

IF YOU WANT —A— VEHICLE,

SEND A POSTAL CARD TO THE

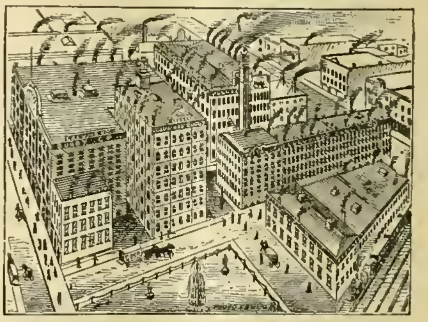
COLUMBUS BUGGY CO.

COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., August 20, 1884. VOL. XX.—No. 34.

THE WEEKLY EDITION
OF
THE AMERICAN
BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1.**

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

FOREIGN POSTAGE, EXTRA:

To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the Chicago P. O. as Second Class Matter.

ADVERTISING RATES.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* **7** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, space, for each insertion

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

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☞ The Cortland Union Bee-Keepers' Association will hold its mid-summer meeting at Cortland, N. Y., on Aug. 26, 1884, in the rooms of the Y. M. C. A.　　M. G. DARBY, *Sec.*

CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00	
and Cook's Manual, latest edition	3 25	3 00
Bees and Honey (T.G.Newman) cloth	3 00	2 75
Bees and Honey (paper covers)	2 75	2 50
Binder for Weekly Bee Journal	2 75	2 50
Apiary Register for 200 colonies	3 50	3 25
Dzierzon's New Bee Book (cloth)	4 00	3 00
Dzierzon's New Book (paper covers)	3 50	2 75
Quinby's New Bee-Keeping	3 50	3 25
Langstroth's Standard Work	4 00	3 75
Root's A B C of Bee Culture (cloth)	3 25	3 10
Alley's Queen Rearing	3 00	2 75
Scribner's Lumber and Log Book	2 35	2 25
Fisher's Grain Tables	2 40	2 25
Moore's Universal Assistant	4 50	4 25
Honey as Food & Medicine, 100 Copies	4 50	4 25
Blessed Bees	2 75	2 50
King's Bee-Keepers' Text Book	3 00	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00	2 75
Bee-Keepers' Magazine (A.J.King)	3 00	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50	2 35
Kansas Bee-Keeper	3 00	2 75
The Apiculturist, (Silas M. Locke)	3 00	2 75
British Bee Journal	3 75	3 50
The 7 above-named papers	8 25	7 00

Local Convention Directory.

1884.　　*Time and place of Meeting.*

Aug. 26.—Cortland Union, at Cortland, N. Y.
M. G. Darby, Sec.
Aug. 29.—Mahoning Valley, O., at Newton Falls, O.
C. R. Page, Sec. *Pro tem.*
Sept. 1, 2.—W.N.Y. and N.W.Pa., at Jamestown, N.Y.
W. A. Shewman, Sec.
Sept. 1, 5.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.
Sept. 2, 3.—Kentucky State, at Eminence, Ky.
N. P. Allen, Sec.
Sept. 4.—Southern Indiana, at Madison, Ind.
Dr. Firth, Sec.
Sept. 9.—Fayette County, Iowa, at Brush Creek, Ia.
B. F. Little, Sec.
Sept. 13.—Union, Western Iowa, at Dexter, Iowa.
M. E. Darby, Sec.
Sept. 17, 18, 19.—Western, at Independence, Mo.
C. M. Crandall, Sec.
Oct. 1, 2.—Cedar Valley, Iowa, at Waterloo, Iowa.
H. O. McElhaney; Sec.
Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec.
Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mic
Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.
Oct. 28, 30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.
Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.
Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.
Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

A. H. NEWMAN, Chicago, Ill.,
C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantnwn, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH, Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

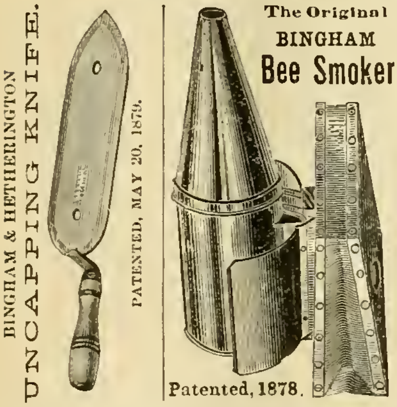
150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
5ABly **HAMILTON, Hancock Co., ILL.**

VALUABLE
ORIGINAL PATENTS.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

For mail rates and testimonials, send card. To sell again, send for dozen rates to

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.
923 West Madison Street. CHICAGO, ILL.

B O O K S !

Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, **5** cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50 cents.**

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per **100**; 500 copies for **$2.25**; 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom. Less than 200 will have a blank where the name and address can be written.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN. —Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN. —In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.— By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

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Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

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Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

☞ We have received the Premium List of the Marshall County, Iowa, Fair, to be held at Marshalltown, Iowa, Aug. 26 to 30, 1884. Mr. J. W. Sanders is the superintendent of the Apiary Department, and there is a number of premiums—amounting to $20 in cash, besides 13 diplomas.

☞ The Maine State Agricultural Society, which meets on Sept. 9 to 13, at Lewiston, offers $60 in premiums in its Bee and Honey Department. Also the Eastern Maine State Fair Association, which meets on Sept. 23 to 26, at Bangor, offers $33 in premiums for bees, honey and apiarian supplies.

☞ In the bill of fare at the Jordan Hotel in White Sulphur Springs, Va., we notice that honey is daily on the tables. This is to be commended; for we believe that in only one country in the world is honey found daily upon the tables of its hotels, and that is in the little Alpine Republic of Switzerland. In the descriptive pamphlet of White Sulphur Springs, we read: "Not the least attractive feature of this delightful resort, to many visitors, is the extensive apiary of Mr. E. C. Jordan, the owner and proprietor of the Jordan Hotel, who is an enthusiastic bee-culturist, and the abundant supply of beautiful honey upon his tables, bears delightful evidence of his success."

☞ Mr. A. Todd, of Philadelphia, Pa., has sent us the Premium List for the Pennsylvania State Fair, and will forward a copy to any one applying for the same. The Collective Bee-Keepers' Exhibit is in charge of the Philadelphia Bee-Keepers' Association. The committee consists of Dr. Henry Townsend, President; Arthur Todd, Vice-President; F. Hahman, Secretary; Mrs. Thomas, T. C. Davidson, and Enon Harris. The premiums amount to $30 in cash; 3 silver and 7 bronze medals, and 5 diplomas.

A Swarm of Bees Loose on a Train.

The Chicago Daily papers record the fact that a railroad train on the Chicago Northwestern Railway was "boarded" by a swarm of angry bees, on August 1. Here is what a reporter of the press says about it:

> Between Lake Bluff and Lake Forest a train of cars ran over a swarm of wild bees, which had come out of the trunk of an old tree standing in the pasture by the roadside. The bees, angered at the death of thousands of their comrades, rose suddenly, flew through the open windows into the coaches, and proceeded to get even with the Northwestern Road by attacking its passengers. The people were thrown into the wildest confusion. The little insects were swift in their work, and spared nobody. It was useless to fight them, for every effort to drive them off made them all the more vicious and determined. Before the train arrived at Lake Forest the bees had fled, leaving their victims with faces and hands swollen and burning with pain.

Bee and Honey Show in Scotland.

The London *Journal of Horticulture* gives the following report of the Honey and Bee Show of the Caledonian Apiarian Society:

> The eleventh Show of the above Society was held at Edinburgh in conjunction with the Highland Agricultural Society on July 22, 23, 24, and 25, under the able management of Mr. R. J. Bennett, to whom bee-keepers are indebted for bringing together the various exhibits that formed the finest exhibition of apiarian appliances and produce that has ever been witnessed in Britain. But, although Mr. Bennet's efforts have been crowned with success, it is not wholly due to himself, nor is it known that it was through his amiable lady, working often till past midnight, that the work was overcome, and the Society successfully launched in 1874. Members of the Society should bear this in mind; and while we congratulate Mr. and Mrs. Bennett on its success, I think both are entitled to more than a mere passing word of praise.
>
> The bee-keepers of England were represented by Mr. Alfred Neighbour; those of Ireland by Dr. Knight, Hon. Secretary to the Irish Bee-keepers' Association; and Scotland, by Mr. Cameron, from Inverness in the north; and almost every bee-keeper of note in the south and west.
>
> In addition to the large tent for manipulating, there was a large tent, 61 feet by 21, completely crowded to overflowing, not holding much over the half of the exhibits, the surplus having to be put outside.

The Book, "Bees and Honey."

In reference to this work, Mr. G. W. Demaree writes as follows for pnblication:

> I want to express my appreciation of the work on bee-culture, "Bees and Honey." In my judgment the book is exceedingly well arranged. A most admirable feature of the work, is that it teaches carefully the great principles of bee culture without an attempt to dictate to bee-keepers what kind of fixtures and implements they should employ in the prosecution of their business. It treats appropriately several subjects connected with the science of bee-culture, which is absent in most other works.
>
> G. W. DEMAREE.
>
> Christiansburg, Ky.

The main objection to some bee-books is the fact that they attempt to dictate to bee-keepers what hive or implements should be used. This was studiously avoided in the book "Bees and Honey," and while describing all the better ones, it leaves the selection to the wants of any locality, or the "fancy" of the individual.

☞ At the District Fair to be held at Friend, Neb., Sept. 30 to Oct. 3, 1884, premiums for the Bee and Honey Department amount to $30. For further information apply to J. O. Frantz, Sec., Friend, Neb.

Marketing Honey.

Mr. Jerome Twichell, of Kansas City, Mo., has sent us a circular, entitled "Some Light on the Subject of Manufacturing and Adulterating Honey", which we give below. This shows what can be done by one person, to benefit honey-producers, by refuting the falsehoods circulated concerning comb honey :

There is a class of people who seem to delight in trying to establish the moral depravity of man, and who would make everything and everybody out as bad till proven otherwise. This comes partly from ignorance and partly from that general distrust which is engendered in a great measure by the very weakness in one's self that he would impute to others. This world is not nearly so bad as some would like to make it ; and if a person be honest and truthful himself, he will investigate very closely before accusing others. How ridiculous, too, some people will make themselves before others who know better, by their gratuitous lies concerning the wonderful production of imitations that far exceed the original in beauty and general perfection. I would speak now only of comb honey. I have heard persons assert in the most positive way that they knew that comb honey could be, and is manufactured ; that they had seen the honey, and had also seen the person who had seen it made. But I have never yet been able to trace up the other fellow who had *himself* seen the process, nor do I think I ever will. No : this much slandered article is as yet beyond the baleful influence of fraudulent imitations, and I defy any one to prove the contrary.

To a sensibly reasoning and thinking person who has ever examined a piece of comb honey, the impossibility of manufacturing the comb, filling it up and sealing it over and preserving the natural appearance of all, will at once appear, at least so far as making it cheaper than can be done by the bees. And what other motive can there be for imitating an article of merchandise, than for the greater gain ? There may be, and no doubt are, some honest, fair-minded people who really do believe it is done, and the impression is probably gained from what they have seen, heard or read of *comb foundation*. I think it likely that this comb foundation is what first gave the idea of such a thing as manufactured comb honey, and the story has become mutilated and multiplied, till we have the very name and address of the manufacturer. But somehow never a reply has come to the numerous letters addressed to him.

Now, this comb foundation which has probably been the innocent cause of so much lying, is simply a sheet of beeswax rolled out thin, with the shape of the honey-cells at the bottom impressed in it, and corresponds with the center division of the comb. This is cut into little strips and placed in the boxes in which the bees are to build their comb, for a guide, and by this means the comb is built in the middle of the little box. Then between each of these boxes is usually placed a sheet of tin, called a separator, so that the comb can be built out just so thick as to leave only working room between it and the separator, and thereby making the smooth, even surface which some people take to be a sure indication of the manufactured article.

Scientific bee-culture has been reduced to such a fine point that few can realize what perfect control the master has over the little workers. They are made to form the letters of the alphabet and all kinds of fancy designs, by the construction of the boxes, and they do their work, under proper management, cheaper and better, I think, than ever man can, by hand or machinery.

This much, however, must be admitted, that the bees will store honey from anything from which they can gather it, whether the orange blossom, mangrove or palmetto of Florida, the white sage of California, the white clover, linn and other flowers of the North, or from the old sugar and glucose barrels around a grocery store in town. It all becomes honey, however, when gathered and deposited in the comb by the bees, and each kind has to go through the same process of purification. The flavor, though is unchanged, and hence we find such a vast difference in the taste of honey. Honey gathered from honey-dew, which is found in great abundance on the leaves of trees at certain times, is very dark, and tastes not unlike New Orleans molasses. Honey produced by feeding the bees glucose will be a white, flavorless sweet, similar in all respects to the original article, except in being cleansed and purified, and not at all injurious, though undesirable to eat, for want of flavor. But feeding bees is done to sustain them when the honey-flow fails in the flowers, and not to produce honey for sale, as it would then cost more than it comes to. From a pound of sugar or glucose they would deposit not more than half a pound of honey in the comb, so that it would cost from 10 to 15 cents more to produce a pound of honey this way than from the flowers. So it will be seen that no fear need be entertained on that score.

WHY EXTRACTED HONEY CAN BE SOLD CHEAPER THAN COMB-HONEY.

There are many persons who, being ignorant of the way extracted honey is produced, will expand their faces in a knowing smile when told the difference in price between it and comb honey, as much as to say,"Oh, yes, I see ; the glucose in the extracted honey is what makes it cheaper." This causes a great many to avoid extracted honey as they would hotel hash. I will endeavor to explain the difference in cost of producing and marketing the two kinds, which will readily account for the difference in price.

The apiarist, in preparing to produce extracted honey, constructs the frames in which the bees are to build the combs, large and strong, with a wire-and wax foundation in the centre. Upon this foundation the bees build the honey-cells, and when well-filled, a single frame will contain some 20 or 25 pounds of honey. This then is removed from the hive, and after "uncapping" the cells on one side, by shaving the surface of the comb with a sharp knife, is placed with several other frames similarly prepared, into the "Extractor" with the uncapped cells facing outward. The Extractor is a machine constructed upon the centrifugal principal, with a revolving cylinder, so arranged as to receive and firmly hold the honey-frames. The cylinder is then made to revolve rapidly by means of a crank and gearing, and the honey is thrown out of the cells against the casing of the machine and passes to the tank below. The frames are then reversed in the machine after uncapping the cells on the other side, and the same process repeated empties the combs entirely of the honey. They are thus uninjured and can be used over and over again, being placed back in the hives and are filled in a short time, thereby, saving the bees much time and labor in building new combs. A colony of bees will produce double the quantity of honey in this way. The honey thus extracted is put into barrels, cans, or any other inexpensive package, and can be shipped at a low rate of freight, with no risk of breakage, etc. Comb honey, on the contrary, must be produced in 1-pound and 2-pound section-boxes, at a cost of ½ to 1 cent each, then put into crates of 20 to 25 pounds at a cost of 10 to 15 cents each, and finally sent to market at double first-class freight rates with an average of 10 per cent. to 15 per cent. damage in transit. Thus it is not strange that extracted honey can be sold 5 cents or 6 cents cheaper than comb honey. That much extracted honey is adulterated, and sold for the pure article, cannot be denied ; but plenty can be had from reliable dealers with a *Guaranty of purity*, and an *affidavit* when called for. I furnish an affidavit of purity with all the honey that I sell.

☞ The Kentucky bee-keepers and others are requested to note the following change in the place of meeting of the State Convention :

Please change the place of meeting of the Kentucky State Bee-Keepers' Association, as announced in the BEE JOURNAL, from the Exposition at Louisville, to Eminence, Ky., on Sept. 2 and 3. N. P. ALLEN,
Sec. Ky. State B. K. Society.

☞ The fifth semi-annual meeting of the Western Bee-Keepers' Association will be held at Independence, Mo., on Sept. 17, 18 and 19, 1884.
C. M. CRANDALL, *Sec.*

☞ The Southern Indiana Bee-Keepers' Association will meet at Madison, Ind., on Sept. 4, 1884, at the Fair Grounds. DR. FIRTH, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

Sending Queens by Mail.

G. M. DOOLITTLE.

Having had considerable experience in sending bees by mail, and having conducted some experiments relative to the food necessary, and the temperature best for bees in confinement, I thought a few items relative to the matter might be of interest to the readers of the Bee Journal. Prior to 1880 the sending of queens by mail was a mere lottery, inasmuch as the chances were nearly as favorable for the losing of the queen thus sent as they were for her safe arrival, and especially if the distance was great enough to keep the bees confined to the cage a week or more.

During the above named year I experimented with several kinds of cages, provisioned with different kinds of food, and kept them in my shop for a period of 21 days. In each of these cages was placed a queen and 10 bees, and once or twice every day I threw the cages about the shop so as to give the bees something of the rough usage they would get in the mails. Those living the longest, or 21 days, had honey in the comb for food. but as this was not allowable in the mails, I dare not use it. The next best was a cage containing a candy made of pulverized sugar and honey; but as I did not know how to keep this in the cage, as Mr. I. R. Good afterwards invented, I was driven to accept the next best thing, which was cream candy. If this was made just right, I had good success in keeping all the bees alive from 10 to 14 days; but if too hard or too soft, I lost heavily in the mails, and could not keep the bees but a few days in the shop. Thus my experiments were anything but satisfactory with what was allowable in the mails.

The next season I began experimenting to ascertain the age the bees should be to best withstand a journey when confined to a diet of cream candy. Several cages were used, and I found that if the young bees from 3 to 5 days old were taken just as they had filled themselves with honey, they would live in the shop from 15 to 18 days, but a confinement of ⅔ that time in the mail bag would generally result in their death. However, as a whole, I was quite successful during 1881 and 1882, losing only about 1 queen out of every 25 sent.

In the fall of 1882, I commenced to use the cage and candy as used by Mr. Good at that time; but in 1883 I used the candy as I had made it in 1880, using pulverized sugar in place of granulated, as it made less litter in the mail bags. During the year 1883 I lost but about 4 queens out of some 300 sent in the mails, some of which were 14 to 16 days enroute. Those which died were the ones that went to the warmest points, and which were subjected to the greatest heat. The past spring I went to experimenting regarding the proper degree of heat in which caged bees would live the longest, and although this matter of heat and cold may not be controllable where bees are shipped by mail, still the matter is not without interest, and we can, to a certain extent, modify it by the ventilation of our cages.

When putting my depopulated and empty hives out of the bee-cellar, after the loss I told you of in the Bee Journal, I found several hives with so few bees in them that I knew they could not pull through to settled warm weather; and having promised several queens to different parties, I thought that if I could save the queens from these depopulated colonies, that I could use them to take the place of those sent from full colonies. Accordingly I began to look about for a place to keep them. I placed a thermometer on the mantletree near the pipe from a coal-stove which was kept burning night and day, when I soon ascertained that the temperature gave an average of 87°, going as low as 75°, and getting as high as 94°. Cages were prepared the same as for shipping queens, and the queen and 10 bees were placed therein, when they were placed on the shelf. The warmth soon made them happy, and a joyful hum, as I supposed, was to be heard nearly all the while night and day. At the end of 3 days, the first bee died, and soon others followed till at the end of 5 days all were dead except the queens and a bee or two with each.

Supposing that the lives of these bees were necessarily shortened on account of their confinement in the cellar during the winter, I thought nothing of their dying thus soon; but when I found that young bees which were now introduced into the cages lived scarcely as long as the first had, I began to wonder at it. After again putting a new lot of young bees into the cages, I placed them to the farther end of the shelf, where the temperature was not far from 80°, when I found that this lot lived on an average about 7 days, when I again had to renew the bees.

Just before this I had placed the thermometer in one of the drawers of my secretary, which stood the farthest from the stove, of anything in the room, where I found that the highest point there reached was 73°, and the lowest was 55°. I now placed the replenished cages in this drawer, and much to my surprise not a single bee had died after they had been there 18 days; and when at 24 days I used the queen, nearly ¾ of the bees were still alive.

It might be interesting to tell in detail how long these queens were in getting to laying after introducing; how some laid sparingly and others did well for a little time; how they gradually failed, etc., etc., but it would make this article too long, as well as being foreign to the subject. Suffice it to say that all are now dead, thus showing that such long confinement is injurious to any queen.

In the drawer, whenever the mercury went below 65° (which was more than ½ of the time), I found the bees in a sort of stupor, all clustered close about the queen; while if it went above 70°, I found them restless and humming as they did on the shelf. I believe, could I have kept them at an even temperature of 60° to 65°, they would have lived two months.

From the above we get a clue to the reason why bees and queens live in the mails so much better in moderate weather than they do in excessive hot weather. It is now a wonder to me that bees stand it as well as they do in the mails, when the mail-bag is often left for an hour or more in the hot sun, which must heat the contents to a pitch almost beyond the limit of insect life. I now ventilate my cages according to my best judgment, and so far have not lost a single queen, this season, in shipping more than I had last year at this time. During our late, cold, July weather I sent one queen to Texas without any ventilation except what got in through whole paper and wood, and although they were 9 days enroute, still every bee went through alive.

Borodino, N. Y.

For the American Bee Journal.

Reversible Frames Again.

J. E. POND, JR.

Mr. H. Davies says that he does not quite understand why I am favoring reversible frames in the *Kansas Bee-Keeper*, and opposing them in the Bee Journal. I will endeavor to explain my position:

The editorial note to which Mr. D. refers, was written early this season, and before I had perfected the tests which I had begun last year. I admit that I was a "little too previous" in favoring them as I did in the *Kansas Bee-Keeper*, but my experiments of last year, which were on only one or two frames in a hive, worked so well, and I found, also, that reversing the sections caused them to be filled out so neatly, that I advised their use.

My experiments of this season with a full set of frames in a hive, "do not pan out quite so well;" in fact they prove to me, that while the desired object can be accomplished with them, viz: the getting of frames completely filled out with comb, still the labor and trouble is so much greater, than to accomplish the same thing by using the extractor, that I now advise against them; at least I advise beginners to "go slow" before making the changes necessary for their adoption.

I have already written an article for the *Kansas Bee-Keeper*, explaining my change of base, which will appear soon. I, like all others, am liable to make mistakes; but unlike some others, I am always ready to "own up and acknowledge the corn," when I find that I am mistaken. I was at first very enthusiastic in this "reversible frame" matter, and made the mistake of praising them before I had used them as much as I ought to before recommending them.

I do not quite understand Mr. Heddon's arguments in regard to the difference in ferocity between pure Italians and the blacks, found on page 469. He there claims the best disposition for the blacks, but at the same time admits that we get the least stings from the Italians. His explanation, that the flying bees are the ones that sting, and those that stick to the combs do not, strange to say is correct; but his explanation, that the natural ferocity of the Italians is what causes them to stick so closely as they do to their combs, and that the extreme mildness of the blacks is what causes them to leave their combs and come for the face of the operator on the slightest provocation, is what puzzles me. He may be correct in drawing the inference which he does; yet I cannot help seeing it just the other way.

One thing, however, I think is certain, *i. e.*, stings we all wish to avoid; and the bees we are all looking after (coming bees) are those which will not fly out and come for us "with a vengeance" every time their hive is opened.

Pure Italians, so far, have proved to be just such bees; and, as yet, we have found no others possessing their natural disposition not to sting; and until a race, strain, or cross can be found possessing the mildness of the pure Italians, together with certain indelible and ever-present marks by which they can always be distinguished, I, for one, shall stick to the pure Italians as closely as they do to their combs, and I shall not be alone in this either.

Foxboro, Mass.

For the American Bee Journal.

Hiving Swarms—Overstocking.

JAMES HEDDON.

The smallest number of colonies that I have ever kept in one area, was 8; and the largest 225. The largest *pro rata* yields I have ever had, was when my apiary numbered not over 35 colonies. (In giving the number of colonies, I always give spring count.)

Now I have no way of determining *positively* that the difference in *pro rata* yields was owing to the number of colonies kept. Of all the apicultural problems, to me this one seems best calculated to keep itself in obscurity. We may change the number of colonies from year to year, but the seasons are also variable; and they vary so slyly that often we have no way of knowing their exact influence upon honey secretion, only by the amount gathered by the bees. The problem is one of vital importance to the growing apiarist, to him who wishes to make apiculture a business, one on a scale large enough to be worthy of the time, attention and labor of a man of thought. Many are the readers of the BEE JOURNAL who are eager to greet anything that may shed a ray of light upon the dark and foggy problem.

Mr. Pond has just made some assertions upon the subject, but he has not yet given us anything like proof, nor do we see how, where or when he had the opportunity to gather any such knowledge as he claims to have. Previous to reading his article, I had not the least idea that there is in these United States a man who believes that a single acre is capable of supporting "25 or 30 colonies," and giving "at least 100 pounds of surplus" to each colony. Now, while I do not know that Mr. P. is in error, I do know how far my bees work to advantage. I also know *about* what proportion of the land in that area is white with clover blossoms. Figures that never lie, tell me that to utilize this one area, we must keep about 25,000 colonies in our apiary, or in this field, if Mr. Pond's estimate is correct.

I never supposed that any one thought that flowers secreted and evaporated their nectar every five minutes. I thought that they were hours and days about it. I know that basswood nectar is very thin the first day of secretion, and only gets to be quite like honey on the fourth day of secretion. I did not know but that the nectar of the first day remained in the blossoms (if not gathered) for several days. I know that there had been a decline in the gold price of honey. Some way or other I do not seem to get more than about half as much for honey as I used to, and even at that have hard work to dispose of the choicest grades; while I have letters of 12 years ago, urgently soliciting cash purchases of my crop. Well, perhaps this difference of understanding is owing to the difference of surrounding influences between Mr. Pond's location and mine.

Mr. G. M. Doolittle writes wisely in relation to the difference in the actions of bees and flora and weather in different locations, causing bee-keepers to entertain such different opinions. This brings me to a desire to give some of my earlier experience in "hiving swarms," since my experience differs so widely from his, as given on page 487; and so perfectly accords with Mr. Hutchinson's, as given on page 437.

As far as mutilating fruit trees is concerned, no one could tell where we had kept an apiary for the last ten years. I do not now remember just when I have had a swarm bother me by alighting on the trunk of a tree. They sometimes do so, but a little experience in that line teaches us how "dire evils fade if wisely met."

To show you how differently queens act here, I will say that among our clipped queens of years ago, and the overloaded ones of to-day that go down into the grass (and it is pretty short grass too), we very seldom, if ever, find them unless we are on the spot when they come out at the entrance. Many times we have looked for the queen by the attention of workers, and not more than one time in ten have we ever seen the workers pay any attention to her. On several occasions we allowed them to crawl to see where they would go, and one time, I well remember, the queen went into a hive more than 4 rods away, and was stung and dragged out.

For years we have been using such capturing-cages as Mr. D. describes, and we have in the yard some frames about 3 feet square, covered with wire-cloth; and if one of these is set up slanting outward, in front of the entrance, just as a swarm commences to issue, nearly all the issuing bees will crawl upon it. The queen being heavier, according to wing-power, is almost sure to, when we can very easily capture her, with the cage described by Mr. D. We must be on hand at once when the swarm starts. This we cannot always do, and the result of it is of not so much importance either. At least not here.

In place of "sheets" we use large cheap spreads of second-hand burlap, only because it is stronger and cheaper. We found, like Mr. D., that we could stop the queen from running out by not letting her run in until after a portion of the workers had declared "a home." That works here. Why will they run in with the queen outside? Because they do not seem to attach much importance to her where-abouts until they all become settled and quiet, when they find that they are destitute of her upon whom the perpetuation of the colony depends.

Now, for this same reason we could never get the bees to cluster any where at will by attaching the queen to that place. Years ago we tried the pole and dry mullen-heads; also a bush and the mullen-heads. We also would quickly attach the cage containing the queen by the use of the annealed wire to a branch of an apple tree, about which they were thickly circling; but they never seemed to recognize their "ma." I recollect only one instance among many where they "went for that cage."

Mr. E. W. Jenkins, now of New Buffalo, Dakota, has assisted me with these and other experiments many times. More than one-half of our queenless swarms would alight, clustering the same as usual, and hang there for hours, if not removed by force. Bees sometimes act very differently from what they do at other times. Quite often, when dividing up a big bundle of simultaneous swarms, as Mr. D. spoke of the bees given to each queen being of several colonies, we find it necessary to cage and introduce the queens to prevent "balling." I have also tried the plan Mr. D. speaks of, to tell from what colony the unobserved swarm issued; but we now use what here suits us better, as it is quicker and prevents "forgetting all about it." We hive the swarm, wait until they are all in, and then having previously saved a gill of the bees, put them into a quart cup with a small handful of flour, shake them up thoroughly, and taking them just outside of the apiary, let them fly, then go back into the apiary, and we have no trouble in finding the parent colony at once.

The plan of hiving swarms, as given by Mr. Hutchinson, is just what we have practiced for several years, and any of my students reading that article with the authors name covered, would have declared that I wrote it. Knowing how easily we learn to overcome the troubles Mr. D. so fears, we still prefer it to any results we can get from clipped queens, with all the conditions and fixtures Mr. D. tells us about. This, we admit, does not prove that Mr. D.'s plan is not best in his apiary.

Dowagiac, Mich.

Spirit of the Farm.

My Plan of Transferring Bees.

ARNOLD DELFFS.

In the first place, according to my observation, the stereotyped phrase, "When fruit-trees bloom then transfer", will not do. The nights are too cold, bees do not secrete any wax to speak of, and do not store any surplus at that time. Tearing down combs, honey and brood, at that period, would cause the adjoining bees to go on a vigorous, perhaps even indiscriminate, robbing expedition. I never transfer my bees before May 15, and often not even so early. But after the middle of June, the operation would, in many localities, be rather late, unless linden and sourwood trees were abundant. My way of proceeding is as follows:

Put a table in the shade, cover it with a quilt or blanket, obtain a strong chisel, an oil-cloth, hand-saw, sharp knife, spool of coarse thread, dish for holding honey, a piece of burning half-rotten elm or hickory-wood (a patent smoker is preferred by some), and a clean frame-hive fitted with frames; select a fine day when the bees are well at work, expose some honey, and observe whether the bees will notice it much or not; if they do not, you may safely proceed. Thoroughly smoke the colony which you wish to transfer; and be in no hurry, but give as many returning bees as possible a chance to enter their home. Next, carry the box-hive close to the table, spread the oil-cloth on the ground and set the full colony on the centre; a sheet will answer, but the burning wood, which you have to employ occasionally to quiet the bees, will almost invariably fire the cotton or linen.

Now place the brood-chamber—minus the frames—on the old stand and put on the lid. The bees which may still return will hover around it, but, as yet, will show no disposition to enter. With the chisel you next take off the top of the stand which you work on; if a box-hive, you sometimes can take out one of the four sides, which will enable you to cut the honey in large, solid pieces. But usually such cannot well be done—never in case of hollow logs; in the latter case you must remove the honey in the best shape that you can; for combs filled with honey can but seldom be transferred, though I have succeeded in a few cases. If the combs are well fastened to the sides, take the hand-saw and saw off the cross-sticks next to the wall. Sometimes it is advisable to cut but one, sometimes it is safe only to saw off but one end, and then again the newly-formed end for about two inches—this latter, if the combs are very heavy and depend for their main support on the cross-sticks.

After this, take the hand-saw, or a long blade, and remove one of the outside combs; it generally has to be mutilated more or less; the removal of the first is more difficult than all the rest put together. Put this comb on the quilt, take one of the frames which lay on top, mark the inside size of frame on the comb, then fit it into this frame. If a close fit, no wrapping with thread will be needed, otherwise the necessity exists. Some use what is termed "transferring clasps" made of tin; others, specially prepared wires. Always let your first choice be those pieces containing the most of the brood, especially if capped over; reject, however, all drone brood, also empty drone comb, unless the queen be very choice. If the remaining piece of comb is too small, save it for wax, like all offal; but two or more may be patched together, some fastening then being needed. As fast as the frames are filled, or partly filled, carry them to the empty hive. After the lower story is supplied, put on the second; proceed as before, and let as many brood or worker-combs be saved as possible. You will but seldom have enough to fill both stories. Give, therefore, empty combs, if you have them; otherwise, sheets of foundation, or even strips of foundation, fastened to the top-bar. The small, empty pieces of worker (not drone) comb that almost invariably accumulate, should not be used for wax; fasten them, too, to the lower side of the top-bar, because the bees will then build with far more vigor and exactness. It is generally warm enough to make the small pieces adhere by mere pressure, but sometimes artificial heat becomes necessary; also, a cement made of heated wax and rosin is recommended.

One very important point to be observed is this: Never let the sun shine one instant on the brood, especially that not capped over. This is the reason why the transferring-table must stand in the shade. After all combs are transferred carefully, lift off the now almost empty stand; on the bottom will be found the bees; carry them on the oil-cloth to the entrance of the new hive and brush them in. If possible make sure the queen enters. In most instances they will stay; in a few isolated cases have I known them to resist stubbornly, and leave *en masse* next day. The way to do then, is to remove a strong colony while at work, and put the transferred comb and hive containing them, on their plate. If a queen can be given, so much the better. A sealed-over queen-cell will do, but even in the absence of them, the returning bees will generally rear a new queen.

I finally wish to make a few general remarks. Most writers recommend driving bees into a box by noise or smoke, but with me this has always been slow and often impracticable work. I much prefer the plan that I have suggested. It is also well to mention, that shortly after having cast a swarm, a colony should not be transferred, as there is too great a danger of destroying the queen-cells. The case is, of course, different if a queen has been hatched. If weak, transfer and put together two and even three colonies; it is customary in that case (if job-work) to charge for but one. In this neighborhood, the usual price paid is fifty cents for each colony, unless the number exceeds one dozen; then thirty-three and a third cents is customary. As usual, it will be found true economy to hire experts to do the work; this rule holds as true in transferring bees as in anything else.

Shelbyville, Tenn.

For the American Bee Journal.

"Honor to Whom Honor is Due."

A. A. FRADENBURG.

Hold, gentlemen! your are entirely wrong. In the first place I fear that you are letting a wrong spirit come up. Can we not discuss our case in a pleasant and friendly manner? In the second place, you are wrong in your conclusions of what I have been writing, and I think there is a good deal of very careless reading.

Let me here state that to the readers of the BEE JOURNAL I am comparatively a stranger, having never taken it nor written for it before this year; but the *Gleanings in Bee-Culture* I have taken, and written for, nearly all of its lifetime, so I am better known by its readers. I have written for the press more or less for nearly 20 years, but have never been so severely criticised as I am now by Mr. W. Z. Hutchinson, on page 483 of the BEE JOURNAL.

I will now see what I can prove in the way of defense. In the first place, I have never claimed that I first discovered the "pollen theory" as he states. The changing of a single phrase, word, or even a letter, many times changes the meaning of a whole sentence, and places the writer in a bad light.

In my article on page 455, I said, "Mr. P. closes by saying, he (the bee-keeper) who first discovers the 'cause' of bee-diarrhœa will receive the heartfelt thanks of his grateful brethren. Now, I claim to be that one." Mr. H. has changed the word "cause" to the word "theory," and the Editor has made the same error in his comments. Now, do the two words mean one and the same thing in this connection? I think not. The first discoverer of the "pollen theory," as here applied, I think means the first one who thinks of or suggests that pollen is the cause of bee-diarrhœa. Hold! Such a theory may be false, or supposed to be false until it is proven true.

Now, let us see who has the best claim to the priority of the "pollen theory," Mr. Heddon or myself. Mr. Hutchinson says: "Has Mr. F. so soon forgotten that Mr. Heddon reported, about a year and a half ago, how he (Heddon) produced diarrhœa at will, by feeding stores well mixed with flour for pollen?" Has Mr. Hutchinson "so soon forgotten" that I reported, more than three years ago, that I had produced bee diarrhœa by feeding flour mixed with winter stores? If he has, I will ask him to turn to *Gleanings*, Vol. IX, page 189, under date of March 14, 1881, the article is headed, "Pollen and its Relation to Dysentery." Now, if he will turn to page 272 of the same volume, and towards the last of his article, Mr. Heddon writes on May 11, 1881, "I, this morning, received a letter from Mr. Shuck, and he suggests the idea that vegetable matter is the cause of the trouble, etc." Now, notice dates and see who has priority, between Mr. Heddon and myself. "Honor to whom honor is due."

In my article referred to in *Gleanings*, I refer to the Robinson letter, which letter will be found on page 151 of the same volume, and to him I think the honor is due of first discovering the "pollen theory."

Again, let us turn to Mr. Hutchinson's article. A little further on he says, "And why Mr. F. should consider his the 'first' experiment is beyond my comprehension." I did not consider my experiment the "first," neither did I say so, nor intimate such a thing. I stated that I had made such an experiment, and gave the result. Again he says, "Mr. F.'s experiment resulted in exactly what Messrs. A. B. Mason, Kohnke, Oatman, Heddon, myself, and many others would willingly have staked our reputation upon that it would." And what is that? That it shows that where there is pollen there is diarrhœa, and where there is no pollen there is no diarrhœa.

Why did not Mr. Hutchinson, and the many others he speaks of, do something, as well as Mr. Heddon, to prove what the cause of the disease in question is, if they could risk so much as he says? Surely, I think there is no question now before the American bee keepers of any greater importance than this one of bee-diarrhœa. Again, Mr. H. says, "But because Mr. Pond put him (Fradenburg) in mind of it, it is simply preposterous that he should claim the honor of priority." To this I will say, that from Jan. 31 to the day I wrote my report, it was scarcely ever out of my mind day or night. I have been awake many a time more than half of the night thinking of the subject in all its lights. I think that Mr. Pond will say that he received a friendly note from me, long before spring, saying that I had found the cause of bee-disease; at least I mailed such a note to him.

Mr. T. S. Russell, Secretary of the Ohio State Cider-Makers' Association of Ada, O., can tell you what I told him while riding in the cars from Dayton to Springfield, last March, that I had discovered the cause of the terrible bee-disease, and that it would be worth thousands of dollars to bee-keepers; and Mr. A. I. Root can tell you that I wrote the same, in substance, to him about the same time. I can name others who I have told about the same thing. Now, is it not strange that Mr. Pond should just happen to "put me in mind of it," to claim the honor of priority.

In regard to the Editor's comments. First he says, "Mr. Fradenburg's assertion that he is the discoverer of the "pollen theory" is, of course, not proven—merely asserted." Of that error I have already spoken. Next, he says, "He only claims to have started his experiments 'last fall.'" There again he is in error. I did not state when I had "first started" my experiments. If he will turn to page 308 of *Gleanings*, for June, 1883, he will see my report of a similar experiment; but in that I did not state that 9 nuclei had no pollen, but that was the case. I did not claim much for that experiment, as that was a mild winter, and for that reason the cry would have been raised that I could not do it again, or in a cold winter.

I cannot find any report from Mr. Heddon on this subject during the year 1883. In 1882 I find the flour experiment only. Now comes the last question, "Who first discovered and gave to bee-keepers the 'cause' of bee-diarrhœa?" Away back in my article, already referred to, of March 14, 1881, I gave a very little evidence in that direction; and at that time I asked this question, which has never yet been answered in the affirmative: "Can any bee-keeper who reads this show that a single colony of bees has ever had dysentery when they have had no pollen at all?" But the discovery that I base my claim upon, was made on Jan. 31, 1884, and the report was written on May 12 and published June 11; and Mr. Heddon's discovery was made in early spring when he unpacked his bees—report written June 9 and published June 25.

Now, if it was a patentable invention, and both Mr. Heddon and myself should apply for a patent at the same time, the patent laws and rules would most assuredly award the patent to me. A few words more and I have done. My proofs have been questioned for an illustration: Suppose a mess of potatoes should be cooked, and arsenic be put in with them and then given to 45 persons to eat, and they should all be taken sick; then, again, another mess of the same potatoes taken out of the same lot should be cooked and given to 14 persons, without any arsenic, and they should not be sick; now, who is there among you that will not say at once that it was the arsenic that caused the sickness? Is not my report a parallel case? But one says that is no poof because bees had been wintered with pollen and no sickness either. True: but hold on, I have taken arsenic into my mouth and swallowed it, and it did not make me sick either, but that does not prove that arsenic is not poison.

I think that bee-keepers owe many thanks to Mr. Heddon for his numerous, valuable articles and good hints which he has given them. I do not ask for a single item that justly belongs to him, or any one else. I will now leave this matter in the hands of the many fair-minded bee-keepers of our land, and fully trust that they will give "Honor to whom honor is due."

Port Washington, Ohio.

[We give the above article a place in the BEE JOURNAL in order for Mr. Fradenburg to give the proof of his assertion about the discovery of the cause of bee-diarrhœa. In reply we shall only notice his reference to us in the last paragraph but three. We based our remarks about his experiments upon his own article as published on page 374, where he attempted to give his proofs; and there he said nothing of any experiments being made prior to "last fall." We should not be cited to other papers for proof when he attempts to give such proof in this paper.—ED.]

For the American Bee Journal.

Honey-Dew—What is it?

W. C. R. KEMP.

In the BEE JOURNAL for Aug. 6, the Editor cautions honey-producers against selling "so-called honey-dew," and warns them, in very earnest language, of the damaging effect it will be likely to have on colonies which have been so unfortunate as to fill their hives with the vile "stuff."

Nearly all writers on this subject designate this mysterious substance as the product of insects called aphidæ or plant-lice. That it comes from any such source, I do not for a moment believe, Prof. Cook to the contrary notwithstanding. That the Professor may have found plant-lice where he found honey-dew I do not dispute; but does he give satisfactory evidence, or in any way show that these or any other insects produced it? Because both were found on the same leaf, and at the same time, is not evidence that one produced the other, or that one cannot exist without the other. As well might he say, that because a honey-bee and a drop of nectar were in the same flower, that the bee produced the nectar. I am no botanist, nor do I make any pretensions to scientific lore, but I have studied something about this honey-dew, and will give some of the "reasons for the faith that is in me."

I have seen honey-dew in great abundance on the leaves of certain trees when under a powerful microscope, and there were no insects to be discovered. That insects infest the leaves of nearly all kinds of trees and plants, that the leaves of only certain kinds of trees produce honey-dew, and also that honey-dew is secreted only in the night-time, and never in the day, is all well known; and if the sun comes up bright and hot by 10 a. m., it is all gone, absorbed or evaporated. Hence, I conclude that honey-dew can be and is produced without the aid of insects.

Well, you ask, "How *is* it produced and where does it come from?" To this question I answer that I believe it to be produced through atmospheric influences; and if Prof. Cook will explain just how the leaf of a tree or plant grows, what gives it its shape, color, and other characteristics, or why one kind of tree contains sweet sap, and another bitter or sour, why one kind of tree produces sweet fruit and another sour—when he does this—then the process of the formation of honey-dew will be easy of solution.

Honey-dew is formed only upon a hard, smooth, glazed leaf, such as the poplar, oak, and others of like character, while it is never found upon a rough, soft, porous leaf. Why? Because the leaf of this kind absorbs it, passes through the twigs into the sap, and gives the sap of such trees its sweet taste; while the smooth, glazed leaf holds it on the surface to be licked up by insects, or evaporated by the rays of the sun.

I have often heard farmers say that when honey-dew is abundant, that "sugar-water" will be the sweeter; and so it is. It will be found that where there is a superabundance of bloom of all kinds covering the earth or any particular section of country that honey-dew will be more abundant, and in proportion to the quantity, the sap of the sugar-tree in the spring will yield more syrup.

In view of these facts, I am led to believe that honey-dew is produced from the aromatic exhalations of flowers and bloom with which the earth teems in the spring and early summer under certain atmospheric influences and conditions; and by some unknown process of Nature's mysterious laboratory, is distilled, and settles upon the trees, shrubs and plants, certain kinds retaining it, and others absorbing it. Is not the theory here set forth—in so imperfect a manner—more reasonable, and more pleasant to contemplate than to suppose that so necessary a product as honey-dew is the work of insignificant insects? I have some of this stuff, "unworthy the name of honey," mixed with the honey stored in my hives this season, and my customers say it is the best honey that they have ever eaten. My family have eaten honey this season that they have not relished before. I have no fears of any damaging effects on my colonies for their having in possession honey-dew mixed with other honey.

Orleans, Ind., Aug. 8, 1884.

[There are many different kinds of sweets called "honey-dew," and if that mentioned by Mr. Kemp is so nice, it is far different from the vile "stuff" which we mentioned as being placed on our desk, and all other samples which we have seen.—ED.]

From the Current.

Song of the Bee.

ERNEST M'GAFFEY.

On wings that brush the morning dew,
  I search the meadows over,
And in my wayward flight I drink
  The breath and life of clover;
The wine I sip is dew-distilled
  For Summer's busy rover,
In nectar sweet that dwells within
  The waving fields of clover.

Through all the golden days of June
  A thousand knights were scattered,
And as they charged adown the fields
  A million shields were shattered.
A million shields of clover bloom,
  In meadows bright and sunny,
Were shattered on their native heath,
  To yield a jar of honey.

And through the wintry days my hoard
  Weaves strange and mystic fancies,
Before men's eyes, in gladsome guise,
  The light of Summer dances;
Beneath a cloudless sky they see
  The clover-fields and tansy—
The sighing woods and velvet moss,
  The violet and pansy.

The lofty walls of crumbling stone
  Where honeysuckles quiver,
As in the breeze they nodding bend—
  Toward the flowing river—
And springing grass, and rustling leaves,
  That welcome ev'ry comer,
As in a dream will float along
  And softly whisper—"Summer!"

For the American Bee Journal.

The Qualities of "Honey-Dew."

J. A. BAYARD.

Is it really honey or simply a saccharine matter that exudes from the leaves of the trees? Some persons, I know, attribute the whole thing as the result of aphidæ or plant-lice. This I hold to be impossible, as the whole work appears to be done in the night time, and it is found exclusively on the upper surface of the leaves of the trees, and in such quantities that no number of insects could furnish the fabulous supply.

It is seldom ever noticed except under peculiar conditions of the atmosphere. Just such a drought as we have now passed through, is prolific of such results, especially when it occurs so early in the summer.

About June 25, I noticed that my bees were diverted from the clover (which was badly smirched by the drought) to some other source of supply, from early dawn until 10 or 11 a. m. They worked vigorously and filled up rapidly with basswood and sumac, as I supposed; but I soon found that the color of the honey was about that of Orleans molasses, and that of the combs when capped, was about that of an old brown hat.

The question comes up: What shall I do with the honey, as I have in store from 600 to 800 pounds? I do not like to eat it, do not like to sell it, and of all things would not feed it back to my bees to winter on.

As the drought affected a large scope of country, there are doubtless hundreds of bee-men in the same dilemma as myself.

If Prof. Cook or Prof. Burrell, or both, will give us, through the BEE JOURNAL, the exact qualities of honey-dew, I think it would be gratefully received.

Athens, Ohio.

For the American Bee Journal.

Philadelphia Picnic.

The train which left the depot on July 26 for Germantown, shortly after the dinner hour, had on board a happy band of pleasure-seekers. Large baskets packed as full as was possible, were stowed away, hearty greetings exchanged, and anxious inquiries made for such members as had been overlooked in the general *melee*. This was the special summer picnic of the Philadelphia Bee-Keepers' Association bound for the apiary of Vice-President Arthur Todd, of Germantown.

Arriving at the apiary, Mr. Todd had all he could do to welcome the bee-keepers, who suddenly swarmed all around him with a greater buzz than ever sounded in his ears before, even in swarming time.

The apiary is situated on the slope of the hills rising to great height on either side of the stream, the dwelling-house standing in the centre closely surrounded by bee-hives on every side, numbering 80 or 90. The house itself was as much adapted for sight-seeing as the apiary proper; for here were rooms fitted up respectively, as work-shop, honey-room, and a room where the honey-extractor standing prominently in the centre, and surrounded by honey-glasses, jars and bottles, uncapping-knives, uncapping-cans, comb-buckets, strainers, and stacks of one-pound jars full of honey neatly labeled and ready for the market. In the work-shop were hives and other fixtures in various stages of completion, heaps of hives and frames in the flat, cakes of wax and sheets of comb foundation, smokers and bee-veils, section-boxes and other bee-fixtures too numerous to mention. The honey-room contained mostly extracted honey, which was being filled into jars for selling to customers.

Work was at once begun, veils were brought forth, the ladies tucked under the same with particular caution, and the members who "did not mind a bee-sting at all," and who regarded a bee-veil as superfluous, alike gathered around the colonies. Hive after hive was opened, frames lifted up, the queen pointed out, the brood carefully looked over, the bees shaken and brushed from the combs of sealed honey, and soon the extractor was whirling out the liquid sweets. All seemed to enjoy themselves highly, everywhere could the happy faces be seen, bending over the hives and viewing their teeming population, and discussing the relative merits and honey-gathering qualities of each colony.

There were present bee-keepers from the neighboring States of New Jersey and Delaware, and from the adjoining counties in Pennsylvania. As the afternoon advanced, the three-banded Italians, of which Mr. Todd possesses a magnificent strain, were much admired. During all these manipulations not one sting was received by anybody.

At 5 p. m. the apiary had settled back into its accustomed peaceful hum, and the bee-keepers were assembled on the steep cliffs overlooking the apiary. Here the fore-thought of Mr. Todd had provided a long table and benches under a grove of trees, also a camp-fire of great logs.

To the left of the grove, Mr. Todd had four acres planted with sunflowers, just opening into bloom, from which the bees were already seen to gather honey. Mr. Todd stated that he used the leaves as forage for his cattle, and intended to utilize the seed for feeding his poultry, besides giving the bees a chance at the honey secretions. To the right were five acres recently sown with buckwheat, which had not yet made its appearance above ground.

Dr. Henry Townsend, President of the association, then addressed the meeting, making appropriate remarks upon the success of the picnic, and winding up with a good bee-talk, which was listened to with earnest attention. Miss Dora Davidson, a young lady of about 12 summers, recited from memory the following original poem, commemorative of the last meeting of the association at the apiary of the secretary, F. Hahman, Jr., which was held about two weeks before:

A MESSAGE TO THE BEES.

One eventide,
At closing of a glorious summer day,
A band of desperadoes bent their way,
In zigzag path along the dusty road,
To harmony's (or Hahman, his) abode.

What seek they there?
Their forms are masked, with meek and cringing air
They shun the house, none will an entrance dare;
And while the timid whisper, "I'm afraid,"
The hardened ones reply, "Be not dismayed."

With soft accent,
Then up and spoke our noble President,
"Comrades assembled here with one intent,
For deeds of plunder we are here to-night."
(Novices now shivered with affright.)

"Though small, I wean
Well armed the foe with poisoned weapon keen
With which they bravely fight for home and queen;
And history tells how they have brought disaster
To many a grave and dignified bee-master."

"Ere I have done,
I cautiously would say, let every one
Who would before the setting of yon sun,
Enrich himself at our weak foe's expense,
Enshrouded wait in ambush by the fence."

"Sire! we obey."
The thieving band now softly went their way
To where the peaceful slumbering village lay;
They hear the busy hum of honest work,
And some draw back, as though the task they'd shirk.

Asmodeus-like
They tear the roof from palace and from hall—
But what is this they hear—a dismal squall!
"I'm wounded!" "Help!" Oh, not for any money
Will I again steal anybody's honey.

Next, the baskets were unpacked, and soon the long table was covered with the good cheer which they contained; and the pleasure-seekers suddenly seemed to realize that they were truly hungry, for the eatables soon disappeared amid rallies of wit and good humor.

As night was now approaching, the homeward journey was begun; not, however, before the members had tendered a vote of thanks to their kind Vice-President for his untiring attentiveness to insure every comfort for his guests, and the trouble he incurred to make their visit a pleasure. Long will the memory of this picnic be cherished in the hearts of its participants.

F. HAHMAN, JR., *Sec.*
DR. H. TOWNSEND, *Pres.*

For the American Bee Journal.

Marshall Co., Iowa, Convention.

The Marshall County Bee-Keepers' Association met at the Court House in Marshalltown, Iowa, on July 5, 1884, with the President, Mr. J. Swift, in the chair. The minutes of the previous meeting were read and approved. The Secretary then read the Premium List of the Apiary Department of the coming Fair, to be held at Marshalltown, on Aug. 26 to 30 inclusive.

The Secretary stated that the premiums offered were not high, for the Agricultural Society could only donate $25 to the Apiary Department this season. Our great object should not be for the money we may obtain in premiums, but that we should make this one of the most interesting departments of the Fair, whereby we may learn from each other of the many wonderful things of this important industry; and also excite an interest in the general public, which will add to the ready sale of our products. Several present thought that it could be made one of the most interesting departments of the Fair. A part of the premiums are to be raised by the bee-keepers' association; and several dollars are already subscribed for that purpose.

The essays were then called for, and the Secretary stated that he had received an essay from Mr. Putnam, of Holland, Iowa, to be read at this meeting, as he could not be present. The Secretary then read Mr. Putnam's essay on

REQUIREMENTS IN MODERN BEE-KEEPING.

A good bee-keeper always needs skill, but in the changed conditions of modern bee-keeping, a different kind of skill is needed from that required by our fathers and grandfathers. This is more largely the case in the West than in the East, but true in both places. Formerly it was mostly manual skill in the use of simple implements, such as the straw-skep, the log-gum, and the common box-hive; but now the apiarist needs to know how to adjust his hives and care for his bees in order to produce the greatest profits.

Bees properly handled call for little manual expertness to manage them; but to manipulate the present implements, requires a degree of mechanical skill that a large proportion of our bee-keepers do not possess. To comprehend the full extent of this, compare the modern Langstroth hive with the old-fashioned box-hive, or the old-fashioned Langstroth to the one of the present.

Every careful observer must recognize the fact that the lack of skill in managing and caring for his bees, is one of the most potent sources of loss to the apiarist. We have known one man to care for 100 colonies as cheaply as another one would 30 colonies—the former buying and using only what was really needed, while the latter bought more than he could use, thinking that the supplies produced the desired results. "Economy is wealth," is an old adage, but it does not apply to apiculture with more force than to any thing else; and to be too economical does not pay any better than being too extravagant. Using only what is needed, and no more, will produce the best results.

According to appointment, Mr. J. W. Sanders then read the following essay, entitled

THE NECESSITIES OF MODERN BEE-KEEPING.

To become successful bee-keepers we must post ourselves well on the many things relating to the "busy bee." In order to do this, we need to procure some good books on this subject, written by practical bee-keepers who have made this great and wonderful study of the honey-bee a life work; and who are able to give us many invaluable and instructive lessons, showing how to become successful in apiculture.

Another necessity is some good bee-paper published in the interests of bee-culture, by which we may keep ourselves posted of the many interesting things which are connected with this great industry.

We think that the first thing in order to become successful, is to use a hive that is plain, cheap, simple of construction, and easy to manipulate for all purposes. We want a hive which contains movable frames in the brood-chamber, and one that is similar to the other hives in the same apiary. Then we can exchange the combs or frames from one to another whenever necessary, which we find is often the case where we have a number of colonies to look after. A movable-frame hive also allows us the privilege of examining a colony whenever it is necessary.

Where we allow natural swarming, it is best that we examine the colony in about two weeks after the first swarm has been cast, and see that it contains a laying queen; and if it does not, we can give them a comb from another hive containing eggs and brood, or else give them a laying queen if we have one at hand, which will save much valuable time. By this means we often save a valuable colony of bees, which, without this assistance, would in a short time dwindle down, and perhaps finally be destroyed by the moth. We say that the worms have destroyed some of our colonies of bees, when the truth is, it became queenless and then beeless, and then the moths took possession.

I think it necessary to examine colonies late in the honey season, and see that they have plenty of brood and young bees for the coming winter; and if they do not, empty combs or frames may be inserted in the centre of the hive, and thereby obtain plenty of young brood, thus preventing "spring dwindling."

At this stage of the season we will find the extractor a good thing, for we can empty some of the combs which are full of honey, and place them in the centre of the hive, and by this means obtain some good honey, as well as plenty of young bees for the coming winter.

Another important article for a progressive bee-keeper to possess, is a good bee-smoker—an article after once using, he will not do without. To be successful we want plenty of empty hives in readiness for the increase, then we will not be compelled to use hives which are not similar to the one already in use. It is also well to have our surplus arrangements previously prepared, for we may need them when we do not have them at hand, and thus be compelled to use any old box for the surplus honey, instead of the nice and neat sections which are more convenient to use, and more attractive to the buyer. I have not attempted to give all the necessities of the apiary, but of others I leave each bee-keeper to judge for himself.

Discussions of questions being next in order, the President asked, "Is it advisable to put empty combs into the centre of the hive?"

J. W. Sanders: Yes; if the central combs are full of brood, one or two combs at a time may be added near the center, to an advantage; or if you do not have combs, empty frames may be added, and you are sure to get nice straight combs built. I had a number of combs built that way last season, and they were generally clear from drone cells.

"Why do queens enter the surplus receptacles?" Mr. Cover said, for want of room in the brood-chamber. Mrs. Van Meter said that she had one colony which had all drone brood and no sign of worker brood, and asked, why is it? Mr. Cover and the Secretary made a few remarks, stating that it was queenless, and was occupied by a fertile worker, which always produced drones. The brood of a fertile worker is easily detected, for the worker cells, when capped, instead of being smooth, are very uneven; and you will find eggs laid without any regularity, many cells being missed, and others with several eggs in them. As a remedy, uniting it with some other colony, or giving it a queen, or means of rearing one, were advised.

The subject of "Summer Care of Bees" was then discussed. Mr. Cover said that he worked for honey and not increase; that he begun in the spring with 58 colonies; and that he stimulated early breeding by feeding rye flour and oatmeal until plenty of natural pollen appeared. By this means his bees get through with swarming early, and are ready for the honey harvest. His first swarm issued on May 14, and the last one on June 5. He had 34 swarms by May 24, and had saved only 11 swarms. He said that he works it in this way: When the first swarm issues, he destroys the queen, and the swarm returns to the parent colony. When second swarms issues, he captures the queens and returns the swarms, or else unites two or three swarms. At the same time he gives plenty of surplus room. He has some Langstroth hives which have on three sets of five-pound boxes. Up to this date, July 5, he had taken off 200 five-pound boxes, and had 300 more in which the bees were working; the majority being about ready to take off.

The question, "How do you capture the queen?" was asked him. Answer: As she comes out, if he is at hand when the swarm issues; and if by any means he should fail, he hives them in a box kept for the purpose, shakes them out upon a sheet, and tries it again.

On the subject of swarming and hiving bees, Mr. Cover gave some very good instructions which all seemed to appreciate.

G. W. Calhoun: "How late is it advisable to put in comb foundation?"

President: As long as the honey season lasts. The President then being called upon to give his methods, said that he began in the spring with 7 colonies, and now has 14. His bees are doing well. He uses comb foundation; in the first place he used whole sheets, but now uses parts of sheets, and finds that the bees worked it out and made nice, straight combs. He had filled the whole space in the sections, but in the future would use only a little as comb-guides. He does not expect to come up to Mr. Cover this season. He thinks that exposure to the air hurts honey, and would like to hear what Mr. Cover thinks of it. Mr. Cover said that it makes some difference. He closes the entrances to his boxes by pasting something over them.

The question, "Where do you keep honey," was answered, "In a dry place, the dryer the better."

The President further said: We, as bee-keepers, want to pay some attention to the sale of our honey. In the first place, we want to have it in a good shape to suit the market, and every thing neat and clean, for the appearance will help to sell it. We must not be in too great a hurry to sell, but wait until there is a demand, and hold out for good prices.

Mr. Cover, on honey sales, said that he sells when the price suits him, and always holds out for a good price on first-class honey in good shape, and always gets his price. He pays no attention to an inferior article in poor shape and low price; for he finds that buyers prefer the good honey to the poor, and are willing to pay for it. He sells comb honey at 20 cents per pound, and does not produce any extracted.

Mr. Cover further said: Do not be scared about our honey crop, for there may be a crash to it like there was last season, and get no fall honey. There may something else happen so that the crop for the season may be short; therefore, I would advise all to hold out for paying prices.

Mr. Wickersham: "How do you get the bees out of the boxes?"

Answer: When the honey season is good, put the boxes into a shed and let the bees go out themselves. If the season is poor, place them in a dark room and give a ray of light. Boxes to be taken off in the morning.

Many other good things were said, that we did not record. By motion, G. W. Calhoun, G. W. Reeler and Mrs. J. M. Van Meter were appointed a committee to assist the Superintendent of the Apiary Department at the Fair.

The subject for the next meeting is "Fall and Winter Care of Bees." Adjourned to meet at Marshalltown, Iowa, on Oct. 4, 1884, at 10:30 a. m.

J. W. Sanders, *Sec.*
Joseph Swift, *Pres.*

For the American Bee Journal.

Hints about the Michigan State Fair.

H. D. CUTTING.

The Michigan State Agricultural Society have furnished a fine building for the "Bee-Keepers' Department," (size 48x32 feet) on an improved plan, and it is hoped and expected that the bee-keepers of Michigan and surrounding States will turn out and crowd it. We know that several of our prominent apiarists are preparing to make a very large exhibit; in fact, we have every reason to think that it will be the largest and finest exhibition ever held at any State Fair.

The Premium List is very large, amounting to $300. The judging is to be done by an expert employed for this department. This is a new feature, and I trust that it will give the best of satisfaction. Exhibitors feeling the importance of our exhibitions are now making application for space, and we also expect several lady exhibitors.

As a place of interest to bee-keepers, I know of nothing that will give you as much satisfaction as to attend our State Fair. You will see a great many new appliances that will help you. I know of several important implements used quite extensively by bee-keepers that were first thought of by seeing something on exhibition in our department. A great many articles will be on exhibition that have never been placed there before. We are to have a comb-foundation machine making foundation during exhibition hours.

Application for space, Premium List, or any information connected with this department, should be made to me.

Clinton, Mich.

☞ The Western New York and Northwestern Pennsylvania Bee-Keepers' Association will hold its semi-annual meeting at Jamestown, N. Y., on Sept. 1 and 2. A general invitation is extended to all bee-keepers. W. A. Shewman, *Sec.*

☞ The Ohio bee-keepers will hold meetings in which they will have lectures, essays, and reports from bee-keepers, during the Ohio State Fair, which will be held at Columbus, O., Sept. 1 and 5 inclusive. All interested in bee-culture are cordially invited to attend. C. M. Kingsbury, *Sec.*
Dr. H. Besse, *Pres.*

☞ Letters for publication must be written on a separate piece of paper from items of business.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

How to Winter Bees.

I have 5 colonies of bees, and am in doubt about the best manner of wintering them. If I should put them into the cellar under my house, will they affect the health of the family living immediately overhead?

W. M. CARR.
Bradford, N. H., Aug. 1, 1884.

ANSWER.—There is a diversity of opinions regarding in-door vs. out-door wintering. My own opinion is, that when we have the inside of the hive in proper wintering condition, or perhaps I may say in any condition, in-door wintering is safest for the latitude in which you live, taking one winter with another. No, the bees will not affect the health of your family.

Transferring Bees.

1. How would you successfully transfer bees from a common' to a Langstroth hive?

2. What would be a reasonable price to pay for a colony of common bees?

C. W. CASTLE.
Prairie City, Ill.

ANSWERS.—1. My answer in full to the question will be found on page 367, BEE JOURNAL for 1883.

2. That all depends upon the season, the time of year, the blood of the bees, the distance from home, how badly you need them, how heavy and large the hive is, how straight its combs are (if you mean to transfer them by the old method), and a whole lot of other things too numerous to mention. With a view of throwing some light upon this subject, I will give a list of values of full colonies according to what I consider them worth in a locality like this, and in the hands of one who knows how, or is trying to learn how to properly manage them. I will give prices of good, average, healthy colonies with good fertile queens all in normal condition on the first day of May. A colony of well-bred bees in a modern hive, with good straight combs, and with but little or no drone cells, the colony going with the body of the hive only, with cover, or if wire-cloth cover, no wood cover, is worth \$8.00; common bees (same) \$7.00; poorer combs and common bees, \$6.00; box-hive and best bees, \$5.00; box-hive and common bees \$4.00. If bought in the autumn, deduct from the above prices 25 per cent. In any case, if the colony contains a tested queen to breed from, add \$2.00.

SELECTIONS FROM OUR LETTER BOX

Immense Honey Crop in California.

July was a very busy month for the bee-keepers of Southern California. Honey was taken out of the hives by the tons. I estimate the honey crop of these five southern counties at 10,000 tons. During the month of July I took out 15,000 pounds of extracted honey at one of my apiaries of 75 colonies; and will yet take at least 1,000 pounds more. The honey which I took was well ripened in the hive, almost every frame being well capped; and the honey was so thick that it was difficult to extract it. This is one of our good years for honey. The yield is large, and the honey is of most excellent quality.

J. E. PLEASANTS.
Santa Ana, Cal., Aug. 3, 1884.

Honey Crop a Failure Here.

The honey crop in this county (Jersey) is a failure. From inquiries made among bee-keepers, I do not think the average will exceed 12 lbs. per colony, spring count; and there is no prospect of a fall crop, as it is very dry here, and also very cold for the time of year. Bees in this section will have to be fed in order to bring them through the winter.

H. D. EDWARDS.
Delhi, Ill., Aug. 8, 1884.

Crop all that could be Desired.

I have, perhaps, the greatest yield of honey on record, 480 pounds to the colony, spring count. Now, provided we get a good fall crop, my yield, per colony, will be all that could be desired, will it not?

C. A. WHEELER.
Selma, Texas, Aug. 2, 1884.

The Worst Honey Season, so Far.

This is the poorest honey season ever experienced here; less honey and less increase. The quality of the honey is fair. White clover did not yield as well as it did last year. Basswood bloomed sufficiently to give us a fair yield, but just while it was in blossom, a steady cold northern breeze lowered the temperature below the point of nectar secretion, and the bees gathered scarcely more from it than they required to carry them through the dearth which followed. Now, just as buckwheat is out, and boneset is opening, it is so unprecedentedly cold that we fear a frost to night, though the sun shines brightly all day. Much of this state of affairs is quite general, and all we can hope for as an offset, is that it will tend to give us something nearer old-time prices and ready demand for our product.

JAMES HEDDON.
Dowagiac, Mich., Aug. 8, 1884.

Wild Sensitive-Plant.

Enclosed find a slip of plant that grows all along the railroad here, and my bees have left the buckwheat and gone to this. It is covered with them. Please let me know through the BEE JOURNAL the name of it, and if it is a good honey-plant.

J. L. COMSTOCK.
Sac City, Iowa, Aug. 7, 1884.

[This is the wild sensitive-plant (*Cassia chamechrista*), and an excellent honey-producer. It grows in great quantity all over our part of the country, in land not too dry, and could easily be cultivated from seed.—T. J. BURRILL.]

Large Crop of Basswood Honey.

From 90 colonies I extracted 5,000 pounds of basswood honey, which was gathered in 11 days. I have taken from 80 colonies, spring count, 7,200 pounds of extracted honey, and 1,200 pounds of comb honey; but now no honey is being gathered, or at least a very little, and bees are killing drones.

B. F. LITTLE.
Brush Creek, Iowa, Aug. 12, 1884.

Desiring Progress.

In this section there are several parties who keep bees, but it is pretty much on the old plan, and we wish more light on the subject. I have 27 colonies, but do not get as much surplus as I should. I intend giving more attention to bees from this time on.

W. S. BARTON.
Washington, Ind., Aug. 11, 1884.

Loosestrife.

I enclose a small sample of a flower which the bees here are now working on. Will you kindly give me the name of it, as I am trying to keep an account of the date, etc., of the flora of this section. Our horse-mint has made another complete failure this season, and the demand for honey is in advance of the supply. I have sold extracted at 10 cents and comb at 15 cents per pound.

FRED F. ROCKWELL.
Leonard, Texas, Aug. 3, 1884.

[Loosestrife (*Lythrum alatum*).—T. J. BURRILL.]

☞ The summer meeting of the Mahoning Valley, O., Bee-Keepers' Association will be held at Newton Falls, O., on Friday, Aug. 29, 1884. All interested are requested to be present. C. R. PAGE, *Sec. Pro tem.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on the second Saturday in September, at 9:30 a. m. This Association is doing a good work, and bee-men in Western and Central Iowa would do well to avail themselves of its benefits. M. E. DARBY, *Sec.*

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ In reply to many correspondents let us say that we take any kind of postage stamps as money, but coins should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

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Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

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☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

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Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

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☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

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☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

Bingham Corner.

MARENGO, ILL., June 18, 1884.

The Doctor Subdues All.—Mr. T. F. BINGHAM, Dear Sir:—I've used the "Doctor" till its all daubed up with bee-glue, and although at first sight I thought I did not like anything so large, I could not now be induced except by the direst poverty, to do with any thing smaller. As a matter of "economy" I much prefer the "Doctor" to any of the cheaper smokers, of which I have worn out several. The "Doctor" has entirely cured me, so that I am now a Bingham man, as my wife always has been. If the somewhat vague remark in your letter means that nothing was charged for the Smoker sent, except the reading of your letter, I shall be very glad of another "Doctor" for the money sent, so that my wife won't take mine from me. Bees just booming on white clover.

Yours Truly, C. C. MILLER.

WOODARD'S LANDING, WASH. TER.

The Best Smoker.—To BINGHAM & HETHERINGTON, Abronia, Mich., Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, Dr. Balch, J. M. Louderback, and H. A. Towner. The Conqueror is the best Smoker I ever used. Respectfully,

May 17, 1884. H. HASTINGS.

DRESDEN, TEX., May 28, 1884.

Conquer the "Cyps."—T. F. BINGHAM, Abronia, Mich., Dear Sir:—Enclosed find $1.75, for which please send, per mail, one "Conqueror Smoker" to Major H. A. High, Waxahachie, Tex. He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror Smoker would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,

B. F. CARROLL.

BORODINO, N. Y., Aug. 15, 1882.

Cyprians Conquered—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's Conqueror Smoker did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham. Respectfully,

G. M. DOOLITTLE.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, P. M., or
BINGHAM & HETHERINGTON,
ABRONIA, MICH.

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Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

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☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 18, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—The demand for extracted is fair, and to all appearances, gradually improving. It brings 6@9c per pound on arrival. There is a small demand for comb honey, but we had small offers only, and a good deal could be sold. It brings 14c per pound on arrival.

BEESWAX—Offerings plentiful at 30@32c on arrival. C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—Sales of comb honey continue slow. As yet there are no arrivals of this season's crop. We have received several small shipments of new extracted honey, which sold readily. For prices on this year's crop, we quote: Fancy white, 1-lb., 16@18c; fancy white, 2-lb., 15@16c; fair to good, 1 and 2-lb., 12@14c; fancy buckwheat, 1-lb., 12@13c; 2-lb., 11@12c. Extracted, white clover, in kegs or small barrels, 8½@9c; dark grades, 7@7½c.

BEESWAX—Prime yellow, 30@32c.

McCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in, and selling at 16@18c. for best white 1 and 2-pound sections. New extacted, 8@9c. Honey in unglassed sections sells the most readily. Old comb honey all gone.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—The demand for comb is very light. The retailers have bought a little during this month; but say that they do not have any call for it at present. Prices range from 12@16c per pound for the different sized frames and style of packages. There is a continued dullness in extracted. Some of the new crop is on sale.

BEESWAX—Is dull, and 25c for dark, with 30@32c for yellow, is the range of prices.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Receipts are liberal, and stocks are accumulating in the hands of receivers. In other words, the market is crowded with sellers, and there are practically no buyers. It is hardly necessary to add that the market is decidedly weak. White to extra white comb, 12@13c; dark to good, 9@11c; extracted, choice to extra white, 5@5½c; dark and candied, 4c.

BEESWAX—Wholesale, 25c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—Fancy white comb, ½-lb. sections, 20c; fancy white comb, 1-lb. sections, 18c; fancy white comb, 2-lb. sections, 17c; choice white comb, 1c per lb. less, and lower grades in proportion. Extracted 7@8c, according to quality.

In fancy comb honey the style of package has as much to do with it as the honey itself, and bee-keepers will look to their interests by putting their honey up in the most attractive shape possible.

BEESWAX—Nominal, 30@35c per lb.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c; in a small way 17c is occasionally obtained, but 16c would be the more reliable quotation; 2-lbs., best white, 14@15c; second quality slow at 10@12c. Extracted slow at 8@9c.

BEESWAX—30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

GEO. W. MEADE & Co., 213 Market St.

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☞ The semi-annual meeting of the Fayette County Bee-Keepers' Association will be held in Brush Creek, Iowa, on Sept. 9, 1884. This is to be a basket picnic held in the yard and lawn of B. F. Little. All who are interested are invited to attend. Come with your baskets well-provided, and we will have a whole day of enjoyment. B. F. LITTLE, *Sec.*

To Kentucky Bee-Keepers.

The president and managers of the Southern Exposition at Louisville, Ky., have appointed the following committee to solicit bees and honey for exhibition at the Exposition: N. P. Allen, G. W. Demaree, Dr. E. Drane, W. Williamson, and J. T. Connelley.

The committee have fixed the time for the exhibition of bees and honey on Sept. 4, 5, and 6. The committee cannot say that premiums will be offered, but will say that if no premiums are offered, that medals, diplomas or ribbons will be given for the following: Best comb honey in shipping condition, not less than 24 lbs.; best extracted honey in shipping condition, not less than 24 lbs; best display of honey; best colony of Italian bees and queen in observatory hive; best display of bees and queens exhibited in observatory hives. We hope all bee-keepers in the State will take an interest in the exhibition.

It is contemplated having an adjourned meeting of the State Society on Sept. 5, at the Exposition, and that the bees and honey exhibited at the State meeting at Eminence, will be sent to the Exposition at Louisville. N. P. ALLEN, *Chr'n Com.*

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☞ The date for holding the next meeting of the North American Bee-Keepers' Society, in the city of Rochester, N. Y., has been fixed for Oct. 28, 29 and 30, 1884. At the last meeting of the Northeastern Bee-Keepers' Association a committee was appointed to secure a Hall and make other necessary arrangements for this meeting. Knowing the men who compose this committee, we can assure all who are interested, that the matter is in good hands, and that everything will be arranged for one of the best meetings ever held by the Society. Rochester is one of the finest cities in the United States, and this should be an enjoyable meeting for all who are interested. We hope soon to announce a complete programme. C. C. MILLER, *Sec.*
L. C. ROOT, *Vice-Pres.*

Young Men!—Read This.

THE VOLTAIC BELT CO., of Marshall, Mich., offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred, as thirty days trial is allowed. Write them at once for illustrated pamphlet free. 6D1y

ITALIAN QUEENS.
(SECOND TO NONE)
BY RETURN MAIL.

Also, Syrian and Carniolan queens, mated with Italian drones. Untested queens of either race, $1.00; tested queens of either race, $2.00. Special rates on large orders. Circular free. Send postal for it. **G. H. KNICKERBOCKER,**
34Dtf PINE PLAINS, N. Y.

BEE-KEEPERS' GUIDE;
Or, MANUAL OF THE APIARY.
11,000 SOLD SINCE 1876.
12th Thousand Just Out!
11th Thousand Sold in Just Four Months!
2,000 Sold the past Year.

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(Sunny Side Apiary,)
Pure Italian Queens, Bees, Colonies, Nuclei,
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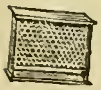

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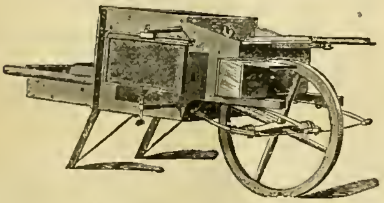

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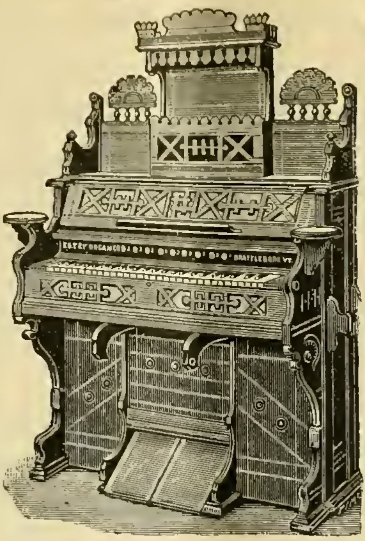
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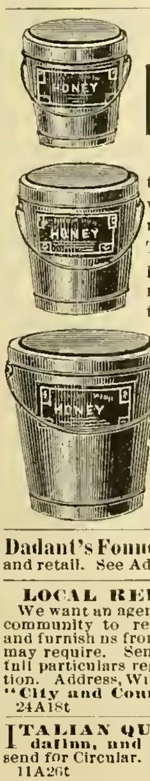

NEW

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Bathing—Best way,
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How to Avoid them,
Clothing—what to Wear
How much to Wear,
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14A26t

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1868. 1884.

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BEST GIVEN COMB FOUNDATION.

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I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus, 8¼x16¼, or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

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I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey	$3.00

(The above will contain two cases complete with sections).

The above Hive complete for extracted honey	$3.00
The above Hive complete for both in one	4.50
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Five or over, each	1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

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I am now ready to furnish white all-Dovetail Sections as follows: 4¼x4¼x6, 7 and 8 to the foot, per 1,000, $6.50; 5x6x2, per 1,000, $8.00. All shipped from here.

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Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

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JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition OF BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

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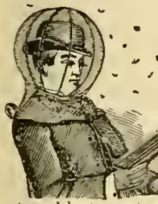

There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

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Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

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I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid ....in May and June, each	$ .50
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Italian—warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK Co., Portland, Me. 4A1y

50 TONS

OF COMB HONEY WANTED.

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COLUMBUS, OHIO,

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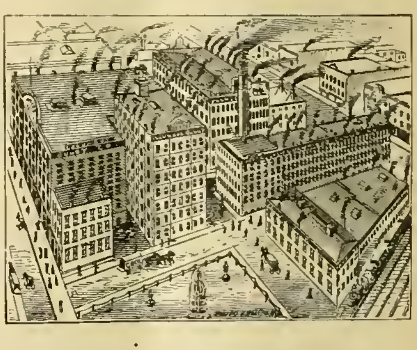
We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



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American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

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For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

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1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., August 27, 1884. VOL. XX.—No. 35.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1.**

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925 West Madison Street., **Chicago, Ill.**

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CLUBBING LIST FOR 1884.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,.................	$2 00..	
and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)......	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)....	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work.........	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing................	3 00..	2 75
Scribner's Lumber and Log Book....	2 35..	2 25
Fisher's Grain Tables................	2 40..	2 25
Moore's Universal Assistant.........	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees...........................	2 75..	2 50
King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year and		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper.....	3 00..	2 75
The Apiculturist, (Silas M. Locke)..	3 00..	2 75
British Bee Journal....................	3 75..	3 50
The 7 above-named papers.......	8 25..	7 00

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

☞ The first Price List for 1885, received at this office, is that of J. W. K. Shaw & Co., of Loreauville, La., for early queens.

☞ The summer meeting of the Mahoning Valley, O., Bee-Keepers' Association will be held at Newton Falls, O., on Friday, Aug. 29, 1884. All interested are requested to be present. C. R. PAGE, *Sec. Pro tem.*

☞ We have just received from the Publishers, J. S. Ogilvie & Co., 31 Rose Street, New York, a copy of a little book entitled, "Seven Hundred Album Verses," containing 128 pages of choice selections of prose and poetry, suitable for writing in autograph albums. 15 cents; cloth 30 cents.

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowsgiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH, Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

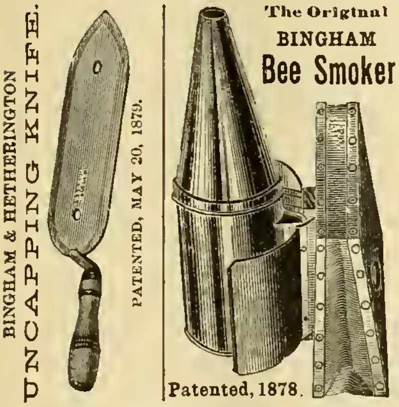
150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
5ABly HAMILTON, Hancock Co., ILL.

VALUABLE
ORIGINAL PATENTS.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

Prices, by mail, post-paid.

Doctor smoker (wide shield)..	3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)....	2½ " ..	1 50
Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker	2 " ..	1 00
Little Wonder smoker...........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch..................		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,
6A2Btf **ABRONIA, MICH.**

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Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,
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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The World's Exposition.

The World's Industrial and Cotton Centennial Exposition, which will be open on Dec. 1, 1884, and close on May 31, 1885. has already become an event of such national and international importance as to commend itself to the kindly interest of every citizen of the United States. The following particulars of it will be read with interest:

This Exposition is held by virtue of an act of Congress, under the auspices of the general Government (which has appropriated $1,300,000 for its purposes), the National Planter's Association and the City of New Orleans. Appropriations for its benefit have been made by the principal States of the Union, by numerous counties and cities. and by several foreign countries.

The main building, now about finished. is the largest structure ever erected, covering 33 acres of space under one roof. The Horticultural Hall, also nearly completed, is the largest building ever erected for the purpose, being 600 feet long by 194 in width. In the centre tower it is arranged to show 20,000 plates of fruit. The Government building will of itself be much larger than the majority of what are termed great Exposition buildings, it being 885 feet long by 564 feet in width. This building will contain the Government and State exhibits. Many other structures will be erected. This Exposition gives every promise of being the greatest and grandest ever held.

It was suggested, some time since, that it would be very desirable for the National meeting of bee-keepers to be held in New Orleans during this Exposition, and we hope that the meeting for 1885 may be held there. It would be a boon to the bee-keepers of the South, and afford an excellent opportunity for a National Re-Union.

If the officers for the present year should see their way clear to postpone the annual convention for 1884 for two months, and have it held in New Orleans, we believe that it would receive the hearty approval of nearly all, and we hereby respectfully suggest that it be taken under consideration. We think that immediate action on the part of the officers would prevent confusion, and make the National Convention for this year the best that has ever been held. This was suggested by Mr. Paul L. Viallon, some three months ago (see page 323), and if the meeting for the present year cannot be postponed, the next meeting should be held there next March or April.

We regret to announce that the Rev. L. L. Langstroth is unable to attend to his duties as President, but the Vice-President, Mr. L. C. Root, is abundantly able to fill the place with honor to himself and pleasure to the fraternity. He is the son-in-law of the late Moses Quinby, to whom we owe much for the development of progressive and practical apiculture. We hope that there will be a general rally of all apiarists, from the North, South, East and West, and that the meeting will be as harmonious as all the former ones have been, and that it will be a grand success. Here is the call for it:

☞ The date for holding the next meeting of the North American Bee-Keepers' Society, in the city of Rochester, N. Y., has been fixed for Oct. 28, 29 and 30, 1884. At the last meeting of the Northeastern Bee-Keepers' Association a committee was appointed to secure a Hall and make other necessary arrangements for this meeting. Knowing the men who compose this committee, we can assure all who are interested, that the matter is in good hands, and that everything will be arranged for one of the best meetings ever held by the Society. Rochester is one of the finest cities in the United States, and this should be an enjoyable meeting for all who are interested. We hope soon to announce a complete programme.
C. C. MILLER, *Sec.*
L. C. ROOT, *Vice-Pres.*

☞ The great St. Louis Fair will be held Oct. 6 to 11, 1884. The premium list of this Agricultural, Mechanical and Industrial Exhibition has just been received.

There are fifteen handsome engravings of the more important points, including a general bird's-eye view of the entire grounds, which is most useful and necessary to exhibitors and visitors upon their visit to this colossal exhibition. The title page of the pamphlet is a most artistic piece of engraving, the subject being a complete miniature representation of the twenty-four departments, each in a separate and distinct vignette.—Altogether, it is a complete innovation upon the system which has been in vogue during the past twenty years, and is a credit to President Green, for its completeness in every particular. Any of our readers who may desire to use a copy of the list, can obtain one, by writing to Festus J. Wade, Secretary, 718 Chestnut street, St. Louis, Mo., and stating that they are subscribers of this paper.

☞ Mr. G. M. Doolittle's aged and helpless father died Aug. 6, at 9 p. m., after a long and tedious illness. Mr. D. has neglected his apiary to administer to the wants of his aged parent, during the past month or more, and he is now worn out with the "hard strain" which be has endured. Now, all is over, and we may truthfully say "Blessed are the dead"—"they rest from their labors"—they are free from their sufferings! The "race" being over, they await the final issue in calm repose.

☞ The bees have again found some honey to gather, and quite a number of "swarms" are reported—during the past 10 days—in Northern Illinois. The fall honey crop promises to be quite good.

☞ We have received the Premium List of the Western Bee-Keepers' Association, to be held at Independence. Mo., on Wednesday, Thursday and Friday, Sept., 24, 25 and 26, 1884. The premiums amount to $180. All interested can get a copy of the Premium List of C. M. Crandall, Independence, Mo.

Local Convention Directory.

1884. *Time and place of Meeting.*

Sept. 1, 2.—W.N.Y. and N.W.Pa., at Jamestown, N.Y.
W. A. Shewman, Sec.

Sept. 1, 5.—Ohio State, at Columbus, O.
C. M. Kingsbury, Sec.

Sept. 2, 3.—Kentucky State, at Eminence, Ky.
N. P. Allen, Sec.

Sept. 4.—Southern Indiana, at Madison, Ind.
Dr. Firth, Sec.

Sept. 9.—Fayette County, Iowa, at Brush Creek, Ia.
B. F. Little, Sec.

Sept. 13.—Union, Western Iowa, at Dexter, Iowa.
M. E. Darby, Sec.

Sept. 17.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburgh, Ind.

Sept. 24-26.—Western, at Independence, Mo.
C. M. Crandall, Sec.

Oct. 1, 2.—Cedar Valley, Iowa, at Waterloo, Iowa.
H. O. McElhany; Sec.

Oct. 3.—N. Ind. and S. Mich. at Goshen, Ind.
F. L. Putt, M. D., Sec.

Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mic

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

Bees in September.

Mr. W. Z. Hutchinson, in *American Agriculturist* for Sept., writes thus:

If a few bees are seen entering the hive, it should be examined. Perhaps from some cause the colony is queenless; and unless proper attention be given, its stores will soon fall a prey to the bee-moths' larvæ, or to robbers. In localities where buckwheat or other field forage is abundant, bees sometimes swarm in the early part of September. By hiving such swarms, giving them sheets of comb foundation or empty combs, and perhaps supplying them with a frame or two of brood, they will usually build up fair colonies by winter, and will frequently be found among the best the succeeding year. Honey is a luxury. Many people do not go to the grocer expressly to buy honey, and only purchase it when seen. Comb honey is usually placed in a side glass case; and extracted honey too frequently kept out of sight. Bee-keepers would do well to furnish each grocer with a neat stand, upon which to expose his extracted honey for sale. Nearly all extracted honey will soon begin to crystallize or "candy," and it should be placed in vessels in which it is to be stored. The writer markets his honey in small tin pails, varying in size from one pint to two quarts. These are filled with honey just as it begins to crystallize, and when solid, the pails have neat labels affixed, stating that crystallization is a good test of purity, and that a gentle heat will soon liquify the honey.

The present month is an excellent time to change the stock of bees. The main honey harvest is over, and if the colony remains queenless a few days, the loss is not great. The best queens are reared during the hight of the honey season, and can be bought very cheaply. Purchase queens of the nearest reliable breeders, as long journeys by mail often exhaust them of their vitality to an injurious extent.

◆

Davenport Bee-Keepers' Picnic.

From a Davenport, Iowa, paper we find the report of the picnic of the Eastern Iowa and Western Ill. Bee-Keepers' Association, from which we condense the following:

Black Hawk's Watch Tower was the scene of a large and animated gathering on Thursday, Aug. 14, 1884, people coming from near and far to attend the picnic of the Bee-Keepers' Association of Eastern Iowa and Western Illinois. This association, organized less than two years ago through the persevering efforts of its energetic President, Mr. I. V. McCagg, of Davenport, with thirty-two members, now has an active and enthusiastic membership of 128, with every prospect of continued enlargement. The practice of its members is to hold their annual business-meetings on February 22, and to indulge in a mid-summer outing for social rather than business purposes, though the "Busy Bee," the sign by which they conquer, is by no means ignored. The first as well as the second of these festivals was held at the Watch Tower, and President McCagg says the third will also be held there next year. The association fixes the number of invitations which may be issued for the summer picnic, at the preceding winter meeting, and apportions them among the members, who sign individually the cards issued. In this way they get together an assemblage of neighbors and friends possessing a common bond of interest, and make their picnic the equivalent of the English "harvest home."

Ex-Mayor B. Davenport, the President of the Rock Island & Milan street-railway, not only kept his word to supply tables and seats, and a brass band free of charge, put had a handsome rustic house or shelter-tent erected, and nicely seated, large enough to hold 600 people outside of the stand, where on this occasion, throughout the day, excellent music was discoursed at frequent intervals.

The street cars began making double trips between the river front and the Watch Tower, at 7 a. m., and kept it up all day. For the accommodation of the Iowa visitors, Mr. Julius Peetz was stationed in the Davenport ferry-house, where he sold ferry and street-car tickets to the picnickers. The Iowa attendance was about 500, while Illinois contributed many more, the crowd being estimated by close observers, at from 1,200 to 1,500 people.

From 7 a. m. until 12:30 p. m., the members of the Reception Committee, Messrs. J. E. Sutherland, C. H. Dibbern, and W. H. Gilbert, and the Misses Emma Goss, Emma Grummol, Emma Earhart and Gussie Gast, were busy attending to the arrivals from all quarters—though principally by the street-car line. From Iowa came representatives of Muscatine, Washington, Cedar, Clinton, Jackson, Iowa and Scott counties; from Illinois came residents of Whitesides, Henry, Mercer and McDonough, beside a large number of Rock Island county people. Another committee which had its hands full during the forenoon was the one on dinner, and was composed of Madams C. H. Dibbern, J. J. Nagle and Mattie Mellville, and Miss Kate E. Case.

The dinner was an immense affair. All the tables were occupied, and some of the groups took to the woods and spread their cloths on the grass in the good old-fashioned style. Some people will have it that a picnic is not a picnic when tables and chairs are used, but perhaps they are prejudiced against new-fangled notions.

The officers of the association arranged for a short business session in the shelter-tent, after dinner. This began at 2 o'clock and lasted until 4. The first address was given by the Rev. O. Clute, of Iowa City, an experienced bee-keeper and writer. He was followed by the Rev. E. L. Briggs, of Wilton. The third and closing address was given by Mr. L. H. Scudder, of New Boston, the apiarist who some three years ago shipped a car-load of honey to Canada. After this came a discussion of questions in which many of the members participated.

◆

☞ The Western Bee-Keepers' Association will hold its second annual meeting in Independence, Mo., Wednesday, Thursday and Friday, Sept. 24—26, 1884. The Association will endeavor to make this the most instructive and interesting meeting it has yet held, and will spare no pains within its means to make it in every sense valuable to all.

C. M. Crandall, *Sec.*

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☞ The bee-keepers of Hancock county, Ohio, met in Findlay, on Aug. 9, 1884, and organized an association to be known as the Hancock County Bee-Keepers' Association. Twenty-two persons became members by paying the dues, 25 cents. The Association meets again on Sept. 20, 1884, at the Court House in Findlay, at 10 a. m. Bee-keepers are cordially invited to attend. Sam'l H. Bolton, *Sec.*

P. A. Riegle, *Pres.*

◆

☞ The Kentucky bee-keepers and others are requested to note the following change in the place of meeting of the State Convention:

Please change the place of meeting of the Kentucky State Bee-Keepers' Association, as announced in the Bee Journal, from the Exposition at Louisville, to Eminence, Ky., on Sept. 2 and 3. N. P. Allen,

Sec. Ky. State B. K. Society.

◆

☞ The Southern Indiana Bee-Keepers' Association will meet at Madison, Ind., on Sept. 4, 1884, at the Fair Grounds. Dr. Firth, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

The Hibernation Theory.

JAMES HEDDON.

I wish to preface the statements which I have to offer upon this subject, by saying that I think that the above theory, Mr. Corneil's "humidity theory," and the "pollen theory," all of them, as they have been strenuously argued by their advocates and admirers, have done much toward getting down to the bottom of this unsolved problem of the cause of our winter losses.

To be sure, as is usually the result in such cases, the zeal and earnestness of the disputants have sometimes gone beyond their better judgment, and unnecessary and unprofitable sharp sparring has grown out of the discussion; but after all, the remaining pith and point, together with the facts the more eagerly sought for and related, have made these articles, as a class, the most profitable to me of any style or class of essays that the invaluable BEE JOURNAL has contained. If any think that I have, in an undue eagerness for controversial victory, overlooked or left unweighed the arguments of my opponents, in this they have been in error.

I am, at this time, acquainted with many facts concerning the actions of bees during their period of confinement that look favorable to Mr. Clarke's new theory (as he believes it to be), or rather arguing in favor of some of the conditions which he considers favorable to safe wintering; but I am also a yearly observer of facts which argue against the theory. Now I will present such of them as Mr. Clarke's article calls forth. It will please us all to have Mr. Clarke, or any one else, come out with the flag of victory over his head, as it will float over all our heads free of cost; but to the end that we know to a certainty that it is "the true flag," we all share the common disposition to make him hold it up in the midst of a shower of balls from the opposition, as we know, surrounded by this cross fire, only the flag of the true theory can remain in the air.

Before we can intelligently discuss Mr. Clarke's theory, we must all adopt one definition of the word "hibernation." According to Webster (all bee-keepers have long known that bees always hibernate during a Northern winter), he defines it thus: "Hibernate, to winter; to pass the season of winter in close quarters, or in seclusion, as birds or beasts.' 'Inclination would lead me to hibernate half the year in this uncomfortable climate of Great Britain.'—*Southey*."

It seems that Mr. Clarke gives the term a definition bordering upon torpor, and quotes good authority for it, Webster to the contrary notwithstanding.

I, too, have always used, and heard used the word "hibernation" as defining that motionless, senseless, numb state of torpor that wasps and ants assume during a cold winter. Now, I do not know, but I do not believe that bees ever enter this torpid state. I have many times made investigations, both in and out-of-doors, opening colonies that were as still as death, but never found anything nearer "hibernation" or "torpor" than a seemingly perfect quietude, one so light that the least jar or admission of light immediately aroused them, showing their condition farther from torpor than human sleep, or even the sleep of a watch-dog. Possibly it may be proper to call the condition which I have witnessed and described, "semi-torpor" or "semi-hibernation." Perhaps Mr. Clarke's paragraph at the top of the middle column, on page 519, means nothing more; if not, I will refer him to the first page of the *Kansas Bee-Keeper* for April 1884, where I used the term semi-hibernations," meaning to cover the ground of this perfect quietude, though I think that the term which I then created is almost too strong, technically defined; but I then thought, and still think, that it correctly conveyed the idea which I entertained. Further than this quietude, I know of no more senseless winter sleep for bees, and I have neither read nor heard of any.

During the second or third year of my bee-keeping, by report of mouth, from not very reliable sources, I heard that "they" had nailed up a colony of filled bees in a tight box, buried them deep under the ground in autumn, and dug them up in first-class condition in the following May. That story gave me my first and last suspicion of possible perfect hibernation of bees. Having at the time an opportunity to inexpensively test the matter, I tried it in several ways, by putting the bees into the ground, both in an excited and a quiet condition; but all alike died, and I gave up the project.

One fall, just before placing some 40 colonies in a double-walled, above-ground repository, I weighed a part of them with great care. For some reason, then (if not now) unknown, nearly every colony in that house readily took on that perfect quiescent state, and the apiary wintered successfully; and when taken out in the spring, and again weighed, the most successful colony weighed but a single pound less than when put in, in the autumn. I might have thought these figures due, or partially due to some error in weighing, had it not been that the others graduated all the way from 2½ to 5 or 6 pounds less in weight. There was no time, however, when the least tap or jar would not cause a response, putting every bee at once upon his guard. Will the reader please note that what we *know* of the necessities of brood-rearing, show us that this colony did not breed during winter.

I am not sure, but I do not believe that any colony ever wintered without any food. If they hibernate, no food would be consumed; as I understand the term to be defined as torpor, total inactivity or suspension of the functions of life. Now, I do not myself know, nor am I aware of any one else who knows the combination of conditions that prevailed in the case above related, or that is necessary to get bees into this quiescent state; but I do believe that if everything else was right, the condition would be defeated, provided the little food consumed was of an irritating nature. I cannot but attribute our troubles to the food, because such a theory is the only one by which I can account for the fact that, while some colonies are doing so nicely in this quiescent state, other colonies in the same room, of the same breed, and in the same style of hive are noisy and sick with diarrhœa, a condition which hundreds have witnessed.

A few days ago, while talking with an expert, and very successful bee-hunter, one who has cut his hundreds of bee-trees, a man of tact and clear perception, and the owner of 200 colonies, he assured me that the fatality caused by the disease, diarrhœa, is shared to fully as great or greater extent by bees which inhabit trees as by those inhabiting the modern hives.

Another point that Mr. Clarke seems to overlook is, that bees in a latitude where long winter confinement is necessary, are out of their natural climate, surrounded by unnatural conditions, and consequently needing the right *artificial* treatment. Mr. Clarke's ninth paragraph reads as follows: "When kept too warm, bees cannot go off into their natural state of torpor. They become restless, get hungry, eat freely, and must void their excrement. If confined to the hive, they befoul it, and then comes diarrhœa with death in its train. The opposite extreme of temperature has a like effect. They are too cold. Hunger awakes them. Their food is as cold as they are. What is the usual effect of cold victuals on a cold eater? We all know."

Here I cannot help thinking that Mr. Clarke, like others of my controversialists, has both eyes so firmly riveted upon his theory, that he cannot see outside facts arguing positively to the contrary. If all who read this controversy, and who have known of colonies exposed to the severest cold, yet coming through the winter entirely free from diarrhœa; and again, colonies kept in repositories with prevailing high temperature coming out equally healthy, should all say "I," the next issue of this paper would be composed entirely of the pronoun I. No, this will not do. Positive experience says, "Look farther."

It is my experience, and I believe it to be the experience of others, that bees can and sometimes do come through the winter in very good condition, making fine colonies for the season following, without going into any quiescent state, but being noisy and restless all winter long. Farther, that a uniform temperature is almost or quite indispensable to the quiescent state, and small consumption of food reported in my weighing experiment given above.

Regarding bees possessing proper instinct for self-preservation at all times, when left entirely under the care of "Dame Nature," she either "forgot" to endow them with it, or did not care for their failure, or herself made a failure; for they do not at all times succeed any better than the tender plant against the drouth, the beautiful shrub against the frost of winter, the sparrow against the hawk, the minnow against the shark, the gazelle against the anaconda, or even man against the myriad forms of michrocoxi which attack him on all sides. Only that higher philosophy can protect us, and he who lays down his Reason, relying upon her weaker sister, Instinct, will be left far behind in the race for success.

Dowagiac, Mich.

For the American Bee Journal.

Hibernation of Bees.

J. F. LATHAM.

As the correspondent, under the caption of "Mr. Heddon's Report," on page 471, asserts that a condition favoring a semi-dormant repose, is the normal condition in which a colony of bees must exist in order to winter successfully; and claimed to be original in calling the attention of bee-keepers to the new (to him) theory, perhaps a few words from some of the other "inexperienced" may not be out of place.

Without a desire to make any advances of a controversial character, I feel like submitting the assertion that there are few, if any ideas embodied in his article that support an originality of conception. Although but a 6-year-old bee-keeper, the fact that a colony of bees should be so prepared as to favor a semi-dormant or somnolent repose during winter confinement, has not been absent from my thoughts while preparing my colonies for winter.

The first impress of the knowledge was imparted to me by an aged dame, while enjoying the whilom luxury of an open, New England, primitive fireplace on a blustering winter evening. "Are the bears out to night, grandma? No; the bears are some of the of the 'seven sleepers.' What are the seven sleepers, grandma? The bears, the raccoons, the woodchucks (a favorite personation), the *bees*, the ants, the frogs, and the snakes. Do they sleep all winter, grandma? No; they wake up sometimes when we have a thaw." Although the old lady's classification may not be scientifically complete, here we have the whole theory of hibernation in a nutshell without evolution or sleepy-awake cogitations.

The knowledge that, on the approach of cold weather, the final requirements for their winter's sustenance are completed, and those animals and insects subject to such requirements by nature, retire to their dormatories to enjoy the sweets of semi-consciousness until the returning sun, by its genial warmth, arouses them to activity, is old. It is not apparent that the hollow tree-trunk, or its similtude is indispensable in producing conditions necessary for hibernation. I have had strong colonies, which, judging from the quantity of *debris* on the bottom-boards, scarcely broached their stores for two months in mid-winter; and came out strong in the spring with clean combs, and with the loss of very few bees. In fact, observation thus far in my experience, has led me to the belief that such colonies pass the winter in the very best condition, the condition which our best bee-keepers are striving to attain; and from what has just been said, the object sought can be accomplished by using the present style of frame hives. A condition which provokes restlessness is one serious obstacle to a favorable result. Another obstacle exists in the characteristics of the bees—idiosyncracies, if I may be allowed to so apply the term.

Last winter was a severe one for bees in this vicinity; and on preparing my colonies for winter, I gave them extra care, treating all alike as nearly as possible. They all (20 colonies) passed the winter safely, and the most of them in prime condition. In a few of the colonies the combs had some mold on them, and a slight evidence of bee-diarrhœa was observable for the first time in my experience. Those which remained the most quiet, came through the best. As the object sought in my winter preparations (as noted heretofore) has always been to attain a condition favoring a somnolent repose, I believe the result of my efforts have been manifested in the conduct of my bees while in winter quarters, and the general satisfactory condition in which they have passed our trying (to them) spring months.

Compactness being one of first principles of hibernation, it is assumed by a colony of bees in repose, whether their resting place be on the "fine twig," or within the walls of the movable-frame hive; and could a proper condition of warmth be maintained at all times, it would be a matter of little importance whether they occupied a partitioned half, or were allowed to roam the whole hive at will. Albeit, I cannot see anything original in my treatment, as the hints promoting it were culled from Prof. Cook's Manual of the Apiary, and more recently from the columns of the BEE JOURNAL.

Again, the attitude of one claiming, at this advanced hour, the ripening fruits of so many others' culture, looks a "leetle" suspicious; and when the mountain was delivered of the mouse, it seems that had the declaration of the wise man, that "there is nothing new under the sun," received a merited notice, the claim would not have been promulgated—or at least not with such evidence of confidence in its merits as a *valuable discovery*. "Honor to whom honor is due."

Cumberland, Maine, Aug. 12, 1884.

For the American Bee Journal.

Northeastern Kentucky Convention.

The Northeastern Kentucky Bee-Keepers' Association met in Covington, on Aug. 13, 1884, in Walker's Hall, with the President, Peter McVean, in the chair. This was the largest and most interesting meeting that has been held since its organization. There were members present from both near and far.

After reading and approving the minutes of the previous meeting, the regular routine of business was taken up and disposed of. The President then called on the Vice-Presidents for essays.

The Rev. L. Johnson, of Walton, Boone county, then read an essay on "Bees, Honey, and their General Management," which was very interesting and beneficial to all.

Mr. Beach, of Kenton county, also read an essay entitled "Queen Rearing," which was criticised severely. It was a very able and masterly production.

There were several samples of very fine comb and extracted honey on the table—especially the comb honey. Several parties had some nice Italian queens for exhibition and sale; also a one-frame observatory hive.

When the question-box was opened, we had quite a discussion, especially when the question about the pollen theory was reached. This question was asked, "Is sound pollen deleterious to bees in winter?" Mr. J. T. Conley, of Gallatin county, seemed to think that it was; but with that exception it received a pretty severe overhauling.

Other questions were asked, such as: "How many colonies can be kept in one place with profit?" "Is wired foundation a success for use in the brood-chamber?" "Are winter passages in the combs necessary?" "What material is the best absorbent?" "How can we winter our bees the most successfully?" "Are the Italians the best bees for profit, all things considered?" "Which are the best bees to create a stampede, Cyprian or Syrian?" These questions and many others were discussed at some length, and duly considered.

On motion, a delegation of three members of this Association were appointed to attend the State Convention which meets at Eminence, Ky., on Sept. 2 and 3, 1884, an adjourned meeting of which will be held at the Exposition in Louisville on Sept. 5.

The President called for reports, which resulted as follows: Kinds of bees kept, Italians principally; kind of hives, Langstroth; number of colonies, spring count, 608; natural swarms, 125, and swarms by division, 140; present number of colonies, 873; amount of comb honey, 3,792 pounds, and of extracted honey, 20,224; condition the bees are in now, fair.

Several new members were added. A motion was made and carried that this convention extend to Mr. J. T. Wilson and family its sympathy in the loss of his property by fire on the night of Aug. 5; and that a copy of the resolutions be forwarded to him.

It was decided by vote that the next meeting be held in Covington, on Sept. 25, 1884, at 9 a. m., in Walker's Hall, corner of Sixth and Madison streets.

A bill of $2 for the use of the Hall was presented and ordered paid. Adjourned. G. W. Cree, *Sec.*

Peter McVean, *Pres.*

For the American Bee Journal.

Let the Bees Swarm.

W. Z. HUTCHINSON.

How often we hear bee-keepers lamenting because their bees swarm. "They were doing nicely, and storing honey in the boxes, when they swarmed, and away went all hopes of a honey crop," says one. "If they swarm, they do well; if they do not swarm, they do better," says another. I want them to swarm, for, with the exception of the present season, my honey crop has been increased by swarming. A colony and one swarm from it has, until this season, stored more honey than a colony which did not swarm.

The present season is peculiar, inasmuch that it opened two weeks earlier than usual, and closed on account of dry weather about three weeks before basswood blossomed. Cold, dry weather and high winds made a complete failure of basswood, from which comes our main honey crop. As all the honey was gathered in the early part of the season, it followed as a matter of course, that those colonies which did not swarm stored the most honey. They stored about one-third more per colony than did those which swarmed, aided by their increase.

The increase is worth what it cost in honey, and had basswood yielded even fairly, the tables would have been turned; and should the fall honey-harvest be even a fair one, they may yet be turned. So I say, let the bees swarm—just once.

I have, for two seasons, practiced the Heddon-method (page 126, Bee Journal for 1883) of preventing after-swarms. Last season one colony in 25 cast an after-swarm; this season not one colony cast an after-swarm.

Mr. A. A. Decker, on page 522, does not like this plan, as it takes as many bees from the old colony as would make a second-swarm. He says, "The old colony needs these bees, the first swarm does not." Will he please tell us why? Will a bee gather more honey if the old hive is its home, than it will if its home is the new hive? Where the honey-boxes are, there should the bees be also; and with this system of preventing after-swarms, the honey-boxes are, or should be given to the new colony.

Mr. D. says: "To get the best results, *i. e.*, surplus honey from the old colony, all the bees that are left when the first swarm leaves, should stay in the old hive during the remainder of the season." Will Mr. D. please tell us whether it makes any difference if all surplus should be taken from the new colony? If the returning bees from the old hive were killed when they attempted to enter the new hive, as intimated by Mr. D., I think that there must have been some unusual cause, as I have seen nothing of the kind in the 60 times, or thereabouts, that I have put this method to the test, in the past two years. All the bees are the offspring of one mother, have been separated only a few days, and the intruders come loaded with peace offerings.

Mr. D. speaks of the time that is gained by introducing a queen to the old colony immediately after the first swarm has issued. If the honey harvest will be over before the eggs laid in those days which are "gained" can develop into bees and become old enough to labor, is there anything of valued gained? That the plan will prevent after-swarming, I know from experience. I prefer, however, to introduce a virgin queen, as a laying queen is worth $1.00, and a virgin queen will begin laying plenty soon enough.

Last winter, at the close of our State Convention, Mr. T. M. Cobb, of Grand Rapids, the Treasurer of the State Association, visited me, and I called his attention to the Heddon-method of preventing after-swarming. A few days ago he wrote me as follows: "I remember with pleasure my visit at your place, last December, and many times have I felt thankful for the lessons you gave me, especially those in regard to the management of after-swarming. Work in my apiary, this season, has been a pleasure instead of, as formerly, full of vexation."

I must return the compliment by saying that Mr. Doolittle's article on "Hiving Swarms," with queens having clipped wings, is the best I have seen in print. However, should an after-swarm issue when four or five swarms were clustered in one mass, it occurs to me that it might complicate matters somewhat. I presume that, like myself, Mr. D. has no after-swarms. I can very readily see that having all of the queens with clipped wings makes less trouble than when only a part of them have clipped wings.

Rogersville, Mich.

For the American Bee Journal.

Lake Shore, N. Y., Convention.

The Lake Shore Bee-Keepers' Association held their fourth meeting at Forestville, N. Y., on Aug. 9, 1884. The President and Secretary both being absent, Mr. U. E. Dodge was elected President *pro tem*, and Messrs. Geo. Adams and J. J. Keyes were elected Secretaries for the day.

The discussion was opened by the following question: "Will it pay to have 30,000 to 35,000 bees in one colony to winter?"

Mr. Evans thought not, and said that when a colony is very large, by taking the combs from the hive and giving them a light shake, the old bees would fall off in consequence of their feet being worn out. He also stated that a colony of bees which is light in honey in the spring will breed up faster than a colony which is heavy with honey, there being more room for the queen to deposit her eggs; and that until it is removed, comb filled with honey is no better than a board.

If in a damp cellar, will raising the combs from the bottom of the hive prevent their edges from molding?

Mr. Dodge said that rims put under the bottom the hives will prevent mold, with plenty of ventilation. He here gave a description of his bee-cellar in which he can regulate the temperature at will. He put his bees out on April 16, commencing at 1 a. m., and finished on April 19. All of the bees did equally well, whether put out in the night or day-time.

"What is the best plan for a bee-house, above or below the ground?"

Mr. Dodge said that he would, if situated as Mr. Adams is, dig into the bank and make a bee-cellar. In reply to a question concerning ventilation for colonies, he said that he could not easily describe the amount which he employed, but used his own judgment and acted accordingly.

Mr. Adams said that he was not satisfied with out-door wintering.

Mr. Evans said that he would make a cellar in a sand-bank, or construct one with double walls. He also said that honey has much to do with wintering bees. If the honey is bad, the bees will have diarrhœa and become weak. Good seasons help to winter bees, and the locality has much to do in the producing of good honey.

Mr. Adams darkens his hives to prevent the bees from flying during the winter.

Mr. Evans knows of a bee-keeper whose hives are made of very thin lumber, and that they were as frost-proof as hives made of thick lumber. He said that he had carried a queen home in his vest-pocket, in November, put her into a hive, and that the operation was attended with good results.

Mr. Adams desired to know why Mr. Dodge preferred a bank-cellar to an ordinary one for wintering bees.

Mr. Dodge stated that it would be more convenient than an ordinary cellar; that it would require far less labor in carrying the bees in and out of it in the fall and spring, especially if the bee-keeper had a very large apiary. With a bank-cellar, one could have a track with a small truck over which he could move the hives in and out with the utmost ease and dispatch.

Mr. Evans said that he had once wintered a colony of bees in his bedroom, that they were confined from fall until spring, and that they did well. In regard to allowing bees to have a cleansing flight in the winter, several endorsed the idea. Concerning the rearing of queens, Mr. Evans said that he would not rear too many queens to sell, and that we keep bees for the purpose of gaining money. Let them swarm naturally. One-half of the queens should be killed, for they were not fit to breed from; but some are more valuable and prolific than others, and some become barren in one year, while the best queens are good for 3 or 4 years. He would advise beginners to get young queens.

Mr. Dodge objected to breeding in-and-in from year to year, and said that bee-keepers must be careful from whom they get queens, and to see that they have no diseased queens in their own apiaries.

Mr. Bolling stated that the queen is the life of the colony; that she must be a good one in order to produce good queens; that the first-born queen is the best, that the old queen leaves with the swarm, and that the old colony has the best queen. He thinks that colonies formed previous to June 24, do the best. He often divides swarms and puts young queens with them, destroying the worthless ones, and advises keeping new or young queens on hand.

Mr. Evans said that it is common to have early swarms, and that he cuts out the queen-cells and lays them on top of the frames in colonies which have lately swarmed; selects the best to allow to mature, and thinks many of the queens which are purchased are nearly worthless.

Mr. Bolling stated that he had seen queens in all stages of development. If queens are hatched from cells which are dry and empty, he would not use them, for they have been starved; while if they are hatched from cells with some of the royal jelly left in them, they have been well fed and are fully developed. In producing honey we must have plenty of bees. He puts on the boxes as soon as clover bloom appears, and thinks that comb foundation is beneficial. This season he had produced 1,000 pounds of honey, had 40 colonies, spring count, and now has 60.

Mr. Evans said that he would rather put 2 colonies together than to have light colonies. They will fill the hive with honey on which to live, and then store considerable surplus. He wished to know whether any of the members had any experience in using a direct passage to the boxes, but no one had such experience.

Mr. Bolling uses a skeleton honey-board and sections 2 inches wide, so set as to leave a clear passage. He prefers sections holding one-pound, and uses tin separators.

Mr. Dodge said that he could not produce honey without the use of glass or separators; could not handle sections and clean them without breaking some of the cells, and thus cause them to leak.

Mr. Bolling asked. "If a black queen is impregnated by an Italian drone, will this impregnation have an influence upon her drone progeny?"

Mr. Evans said that a fertilized queen carries the fertility in a sac, and that her drone progeny would be affected.

Mr. Dodge said that in order to insure success in a convention, there should be free and full discussion on all questions of importance in bee-culture by every member.

The next meeting will be held at Fredonia, N. Y., on Sept. 6, 1884. at 10 a. m., in the Park House.

C. E. DODGE, *Pres. pro tem.*

For the American Bee Journal.

Hints to Bee-Keepers.

J. M. HICKS.

It is not generally understood or believed that nine-tenths of the moth-worms found in the brood-combs are produced by means of the bees carrying the eggs in with the pollen or bee-bread; nevertheless it is a fact.

Never buy a bee-hive expecting to get a moth-proof hive; for if you do, you will surely be disappointed as thousands of others have been in the past, by not knowing or fully understanding the natural laws which govern the ever "busy bee."

Now is a good time to prepare a quantity of hard candy from sugar, for fall feeding, if it is found to be necessary.

I would suggest to all who contemplate keeping few or many colonies of bees, to make their increase by division, performing it in the night-time, and in accordance with natural laws, using first-class movable-frame hive for the purpose, one in which bees can be easily and quickly managed without irritating them.

Always rear your young queens from mothers whose worker progeny has desirable qualities, such as a kind and amiable disposition as well as being industrious honey-gatherers.

In order to eradicate ants from bee-hives as well from ant-hills, let me suggest a free use of strong brine, which, if made hot and poured on, will effectually clear them out, and is no detriment to the bees. Good brine placed in small troughs with corn-cobs or chips as floats, is good for bees, and is a preventive of foul brood as well as an antidote for bee-diarrhœa.

Battle Ground, Ind.

* * *

For the American Bee Journal.

Nor. Ind. and Sou. Mich. Convention.

On July 29, 1884, pursuant to a call, the Bee-Keepers of Elkhart and adjoining counties met at the County Superintendent's office, in Goshen, Ind., at 2 p. m., for the purpose of organizing a Bee-Keepers' Association. W. H. Barney, of Elkhart, was appointed temporary chairman, and A. Blunt, temporary secretary.

The following committee on permanent organization was then selected: A. Blunt, Goshen; E. H. Corpe, Vistula; C. C. Carmien, Goshen. The committee presented the following for officers of the association for the ensuing year, and they were unanimously elected:

President, A. Blunt; Vice-Presidents, Jacob C. Mishler and W. H. Barney; Secretary, Dr. F. L. Putt; Treasurer, M. J. Schrock.

After a few remarks, the President informed the convention that the first business in order would be to appoint a committee on constitution and by-laws, and the following gentlemen were selected; W. H. Barney, Elkhart; E. H. Corpe, Vistula; A. D. Hartzler, Goshen.

This committee reported a constitution and by-laws, which were unanimously adopted with the exception of an article of the by-laws with reference to the executive committee. On motion of Mr. Barney, this article was so changed as to constitute the President and Secretary a part of the executive committee. The President then appointed the following executive committee to act with the President and Secretary: C. C. Carmien, Goshen; Victor Garry, Millersburg; W. Buzzard, New Paris.

It was then moved and carried that the President should report this meeting in such papers as he saw proper. On motion, it was decided that the association should hold its next meeting in Goshen, on October 3, at 10 a. m. The executive committee was instructed to appoint two members to read essays at the next meeting on some subject pertaining to bee-keeping.

The association will be known as the Northern Indiana and Southern Michigan Bee-Keepers' Association.

The signing of the constitution and by-laws was considered, and 24 names placed upon the Secretary's book.

Membership fees to the amount of $9.50 were received by the Secretary and paid over to the Treasurer. It was ascertained that over eight hundred colonies of bees were represented by those present. No one will question the advantages of united effort and frequent conferences by those engaged in so important a rural industry as that of bee-keeping; and most certainly, as a subject of natural history, it is worthy the careful study and investigation of every thoughtful person. Much interest and enthusiasm were manifested by those present, which betokens a successful future to our association, and more enlightened views respecting the management of the apiary by its members. On motion, the association adjourned to meet as above specified.

A. BLUNT, *Pres.*
F. L. PUTT, M. D., *Sec.*

* * *

Prairie Farmer.

Bee-Pasturage, Fall Honey etc.

MRS. L. HARRISON.

In a recent trip through Woodford, Marshall and Putnam counties, Ill., I was pleased to note the progress that bee-culture is making. I traveled slowly in a phaeton, and was continually on the lookout for hives. The log-gum is apparently obsolete, and the box-hive nearly so; being used only when other hives are not to be obtained, or a runaway swarm is captured. The hives in use are the Langstroth, or modifications of it.

The proximity of bee-keepers could be detected readily, by the presence of sweet clover (*Melilotus alba*) growing along the highways. Where the roads are little traveled, this plant grows luxuriantly, and the seed is carried long distances, and distributed by wagon wheels. It is not a favorite with farmers generally, although its fragrance is to be preferred to dogfennel, rag-weed, etc.; but white clover (*Trifolium repens*) has many friends and no enemies. It raises its modest head wherever its roots find lodgment. A heavy sod of this clover prevents the highways from washing during heavy rains, and is especially useful, in this way, in clayey soils, near streams of water. Horse-mint (*Monarda punctata*) is blooming in the hedges, and from Texas comes the report of prodigious yields of honey from it. I have seen no bees working upon this plant, although now blooming in profusion, but I have noticed them literally swarming over catnip (*Nepeta cataria*). This is a very desirable honey-plant, and should receive increased attention from bee-keepers.

Reports come from Ohio of a severe drouth of six weeks' duration, and that the sources of honey are all dried up. From Arkansas we learn that the reverse is the case. In this locality, rain and showers have been frequent, so there is abundance of bloom, and if the weather is hot during August and September, the yield of autumn honey will be large. On my trip, I noticed that the rain areas were quite small; for two or three miles the oats would be beaten down almost as flat as if rolled, and a few miles further on, they would be erect and waving in vigor and beauty, unscathed by winds and storms. This diversity in the rain areas will make the honey crop irregular. In some parts of the State the autumn bloom will fail, because of drouth.

Peoria, Ill.

For the American Bee Journal.

Is it "Honey-Dew?"

A. GIBSON.

In May I noticed that certain trees, particularly box-elder, began to look very peculiar; the leaves stopped growing, turned a darker green, and the new shoots ceased to grow. On closer inspection I found insects, or what seemed to be small white lice on the leaves, and at the same time drops of syrup covering the leaves to such an extent as to make the branches so heavy that they would droop by sheer weight of the sticky, sweetish syrup on the leaves.

Under the box-elder trees, this syrup could be found covering the ground, and when it fell upon the boards of the sidewalk, which it often did, it left stains which looked as though hot syrup had been thrown upon them; and it was not obliterated till after several hard rains. For about two weeks in June, to walk under these trees in the morning, was dangerous to clothing. In looking at the hat and coat after going, or just passing under a tree, I found it covered with large drops of transparent syrup as thick as very thick honey. This sticky substance could be removed only by applying very hot water.

It was also noticed that early in the season the lilac bushes were covered with it to a remarkable extent; but these bushes did not suffer like the larger trees. The box-elder trees, up to July 10, looked very hopeless; the leaves only half-grown now began to wither, and the tree bore every appearance of early and speedy death; but from some cause or other, about the middle of July, they began to liven up, new twigs began to grow, and at the present writing, the trees are putting on a new growth of very light green; and those trees which were pronounced dead, have again put forth their leaves.

The season during which this syrup-flow continued, was of 4 or 5 weeks' duration. Early in the morning, bees fed almost exclusively on this substance, and later in the day it would get so stiff that they could not work it up. The honey gathered from this dew (?) has a very dark, reddish appearance, and has a sickish taste. I consider it unfit to eat.

The bees stored honey from this very fast. I have a row of hives setting under a row of box-elder trees, and this dew fell from the trees upon those hives, covering them with this sticky substance which becomes mixed with the dust blown on them by the winds, thus giving the hives such a nasty, unsightly appearance that I was obliged to wash them so as to get rid of it. I consider this substance injurious to my bees, and at some future time I will explain how.

Ponca, Neb., Aug. 12, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

How to Build a Bee-House.

Will you please answer the following questions through the BEE JOURNAL:

1. What would be the best way to build a bee-house for wintering bees and for extracting honey and storing general apiarian supplies during the summer? I propose building a small brick house on the east side of my dwelling, fronting the south.

2. About 100 feet to the north there is a small ravine about 12 feet deep with a close grove of pine trees, making an entire wind-break from the north. As the ground is very dry, would you recommend making a cellar, say 4 or 5 feet under ground, and build it up to 7 or 8 feet, for wintering bees in, and use the upper part as aforesaid? or had I better build a little larger and take off a room at the north end for wintering above ground? I can build frost-proof cheaper here with bricks than with wood.

3. Which is preferable, brick or wood for a house for wintering bees?

Norwich, Ont., G. W. TIDEY.

ANSWER.—I have, this season, built a new honey-house in my home apiary. I built it 18x30 feet, with a cellar of the same size under it, and 8 feet deep. It is two stories high, the lower one being sealed with wood (painted white) all over inside. I want a cellar as much all under-ground as I can get it. I would advise you to build your cellar as deep, or as much in the ground as you can handily, and build your house and cellar about twice as large as you now think you need it, and you will likely be very glad that you did so, if you do not remain in the business.

Killing Young Bees.

In the forepart of last June, I bought a colony of hybrid bees with an Italian queen. They were carried a considerable distance and placed upon the stand where they were to remain. On the second day after, I noticed a murderous work going on; every young bee that came out of the hive was seized and killed. Not less than a half pint of these dead bees lay in front of the hive. This was a mystery which I could not solve. The top of the hive being nailed down for purpose of safety during the removal, I did not remove it until this time. I found in the honey boxes large quantities of dead bees, which, in their fright, probably sought a place of escape through the top of the hive, add were shut in and suffocated by the falling of the comb foundation which covered the place of entrance. Can you account for this cruel and apparently wanton destruction of the young bees? This ceased as soon as the upper part of the hive was relieved. L. FREEMAN.

Barry, Ill., Aug. 12, 1884.

ANSWER.—To fully decide in my own mind the cause of the trouble you mention, I should need to know more of the details than I gather from your account, and perhaps more than I could learn were I on the ground; but if the young bees appeared in a perishing condition (for want of ventilation), I should think that the old workers were carrying out what they considered damaged or past the point of usefulness, and dangerous to the health of the survivors.

The Michigan Fruit-Belt.

1. Is the fruit belt of the State of Michigan as hopeful a locality as other portions of the State for the production of honey as a speciality?

2. If so, what comparatively new counties would you think most hopeful? S. S. KANAGA.

Millersville, Ill.

ANSWER.—Some locations in the Michigan fruit-belt (of which I live in the eastern edge of the southern end) are first-class honey locations. The "new counties" are further north, and many of them are good fruit locations, and also good for honey-producing. Go to what localities you may, you will find it possessing some advantages and disadvantages. I have no choice in counties, to offer.

Honey-Plant for Hedges.

I want to plant a nice, thick hedge around my garden next to the fence, of some pretty flowering shrub which is also a good honey-bearer and which will keep in bloom most if not all of the season. The query is, Can such a plant be obtained? I have two large bushes of the shrub called snowball or snowdrop which fills the bill, if it is a honey-bearer. It begins to bloom early in the season and remains in bloom until the frost comes, and seems to be never free from bees and yellow-jackets that work it most industriously from early morning till after dark. I have frequently seen the bees working it when it was getting dark. Will you kindly reply to the above through the medium of the BEE JOURNAL? SUBSCRIBER.

Yorkville, Ont.

ANSWER.—This is a question which I feel incompetent to answer. Of all the branches of apiculture, I am least posted in regard to its honey-flora. I will remind you that many flowers which yield honey well in one climate, will scarcely yield at all in another, where they will grow and seed successfully. I advise you to use your own judgment. If you like the snowball as a hedge-plant, and the bees like it as a honey-plant (as yours seem to), I would advise its adoption for your purposes.

Red-Colored Honey.

1. Will Mr. Heddon kindly inform me, through "What and How," from what source some of my bees have stored red honey of a bitter taste, but otherwise of good flavor. The trouble seems to be confined entirely to 2 colonies. Would such honey be safe to feed even for winter stores?

2. Are juices gathered from bruised apples and pears suitable for winter stores, if but little pollen is gathered at the same time? W. J. RASIN.

Jenkintown, Pa., Aug. 12, 1884.

ANSWERS.—1. This question I cannot answer, having no practical knowledge of your flora; but from my experience here, I should not be afraid of the bitter honey for winter stores for the bees.

2. I should not consider such juices fit for winter stores, though I do not know that they will even tend to promote diarrhœa, but I prefer more concentrated and more highly oxygenized food during the cold winter.

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on the second Saturday in September, at 9:30 a. m. This Association is doing a good work, and bee-men in Western and Central Iowa would do well to avail themselves of its benefits. M. E. DARBY, *Sec.*

SELECTIONS FROM OUR LETTER BOX

A Good Fall Honey-Crop Expected.

From 26 colonies, spring count, I have taken 2,300 pounds of extracted honey, and 300 pounds of comb honey, making an average of 100 pounds per colony. I have increased them to 45 colonies, and should the weather prove favorable, I expect a good fall crop of honey, as the bees have been doing well for a few days past. H. H. WARREN.

Myra, Wis., Aug. 18, 1884.

Botanical.

Will you please give the names of the two enclosed specimens of plants? also their value as honey-producers? No. 1 is a garden plant, and the bees gather pollen from it. No. 2 grows in low places, and blooms in the fall. Both grow 3 or 4 feet high.

Bloomington, Ill. H. W. FUNK.

[No. 1 is *Thalictrum anemonoides*. It is a common wild plant. I have often seen bees on it, but do not think that it is very valuable, only as very early plants are always desirable in stimulating the bees. No. 2 is an aster. All of the asters are valuable. —A. J. COOK.]

The "Pollen Theory."

Thank you, Dr. Tinker! It seems that you read closely. The glory of first public mention of the "pollen theory" is enough to set one wild; but the idea of *me*, a patent-hive man, thinking of something *first*! I am afraid, if this is *so* and becomes known, that not only will pollen make bees sick in winter, but that they cannot be cured, and that "pollen theory" will be a term of reproach and I will be held accountable for it. Let us blame Bingham. I believe it *was* Bingham any way; at least he is used to smoke and can stand it. In the mean time, let us search for "a balm in Gilead" to heal the bruises which Mr. Heddon has received in trying to prove this theory. He is always trying to prove something. His mental economy is likened unto a great press which is specially designed for the discovery of leaks, and the consequence is that he knows of very few vessels that will "hold water." We will glorify Bingham, mollify Heddon's wounds which were received in honorable battle, and be happy. J. M. SHUCK.

Des Moines, Iowa, Aug. 19, 1884.

Bees on the Nebraska Prairies.

I have just completed a series of journeys north and south of the Platte river in Nebraska, and have observed carefully the bee-doings of the State. The bee-belt now extends beyond the 100th meridian, into the northern counties beyond the Platte river, far west of the Missouri, where the farmer has displaced the herdsman. This, for the preceding reason, is a manifest sign of progress. Here, the season for honey has been good so far; and there is every indication of a large gathering. When the season of Neb. is named, it really means from the first of July to the coming of the first frost, which may be towards the end of September, or late in October; and during this time, richest honey-flowers are in bloom on the prairies. Besides the Italian, there are now in the State the Cyprian and Palestine bees. The latter are not regarded as profitable as the Italians. Recently I called at the large apiary of Mr. G. W. Hawley, near Lincoln, and found him busy. Mr. Hawley called special attention to two honey-flowers which he finds useful. He was enthusiastic about the Bokhara clover, which affords honey-pasturage during the best part of the season. A patch, cultivated in the nursery, grew 8 feet high, and on one stem there were over 20 branches; the plant covering a space of six feet, and having not less than a thousand flower-heads on it, on which the bees were working all the time. The well-known matrimony-vine (*Lycium barbarum*), with its millions of inconspicuous flowers was also covered with busy bees; but, notwithstanding its usefulness, the sprawling growth of the plant prevents Mr. Hawley from recommending it for bee-pasturage. O. A. MULLON.

Lincoln, Nebr., Aug. 11, 1884.

Honey Season almost a Failure.

So far, this season is almost a failure. The bee-keepers here were jubilant over the prospects at the beginning of white clover bloom, but we had an everlastingly heavy rain which cast gloom and sorrow over the high spirits of the bee-keepers. For the past week or more the bees have worked hard in the mornings and gathered considerable honey from the oak, buck-bush and other plants. I think we will yet have a full crop of honey. Spanish-needle and other fall honey-plants are yet to bloom, and they generally produce honey if the season is favorable. C. H. McFADDIN.

Clarksburg, Mo., Aug. 15, 1884.

Experience with Sweet Clover.

In the fall of 1882, I bought one peck of sweet-clover seed, and sowed ⅔ of it on about 2 acres of oat stubble, simply sowing it broadcast. The other ⅓ I sowed during the following spring upon the same ground, and on ¾ of an acre of the same stubble field that was sown to timothy in the fall. Of the fall sowing I never saw a plant; the reason being that the fall was so dry as to scarcely start timothy; and the clover being a larger and light seed, it was not covered, but it must have sprouted or it would have come up in the spring. The spring sowing came up all right, but when I cut the timothy, all the clover sown with it died on account of the dry weather. About July 20, this year, the clover that lived began t blossom, and such a buzzing on it as the bees kept up was enough to delight the heart of any bee-keeper. It has proved to me: 1. That it is a splendid honey-plant here in Iowa. 2. It just fills the gap between the blooming of other clovers and the fall flowers. In order to have it bloom next year, I shall cultivate about one-half of the ground, thus leaving small furrows, and then harrow it in. Bees here have increased fairly well; my own having increased from 8 colonies to 21, and most of them are now in good condition; but I have not yet heard of any one taking a bit of surplus honey, although the clovers never bloomed more profusely. They gained some ahead, but used it afterwards in brood-rearing. Basswood bloom produced no nectar. Our time for surplus, however, is generally during the next four weeks. JOS. BEATH.

Corning, Iowa, Aug. 13, 1884.

Enjoying a Good Honey-Flow.

Last season the honey-flow was continuous from June 1 until Aug. 15, with the exceptions of rainy days and no fall honey crop. This season we had a splendid flow of honey from white clover from June 1 until July 1, and after that the bees did not make a living until Aug. 9. Since then we have had a splendid flow of honey from the second crop of white clover, and from buckwheat; and we are now in the midst of as fine a honey-flow as I ever saw at this time of the year. GEO. E. HILTON.

Fremont, Mich., Aug. 18, 1884.

No Surplus Honey.

Bees have done but little good here for several weeks. We have had no surplus honey yet. The weather is so dry and so very dusty. The outlook is very poor for a good yield this fall. Our grain and garden crops were never better in the last 20 years. J. M. HICKS.

Battle Ground, Ind., Aug. 15, 1884.

Report for the Past Two Years.

In the spring of 1883, I began with 16 colonies, 12 in fair condition, and 4 weak. In May I fed them 50 pounds of the best granulated sugar made into syrup, so they built up and were ready for the honey harvest when it came, which was later than usual here. They increased by natural swarming to 37, and I took 3,243 lbs. of extracted honey from them. They had very little comb to build, for I had a lot of good combs to give the increase. I sold nearly all of my honey in my home market in small lots, and realized an average of 13½ cents per pound. Last winter I wintered them on the summer stands in large boxes with 6 inches of wheat chaff all around the sides of the hives, and 9 inches on the top, and lost only 2 in wintering, and none in the spring, and had no spring dwindling. I did not unpack them until after fruit bloom was over in the spring. I commenced this season with 49 colonies, and increased them to 99 by natural swarming. Forty-six of my 49 colonies were in splendid trim for the season's crop, which bid fair to be a good one, but we had so much cold, cloudy, windy weather in June and in the early part of July that I got only a little over 2,000 pounds of extracted and 60 one-pound sections of comb honey. Others about here who worked for comb honey, got none. I have been very successful in preventing after-swarms this year, by giving a mature queen-cell to a colony the day after it had cast a swarm. If possible, I give cells that will hatch in a few hours, or in a day at the most. My bees are all mixed with Italian blood, and have at present full winter stores with a fair prospect of getting enough to do them for present use, or until frost. Basswood was a failure here this year, and thistles did but fairly. This year's honey is of good quality. W. J. HONEYFORD.

Avening, Ont.

Diseased Bees.

I have a colony of bees which has been diseased during all of this season, having begun early last spring. The colony was, early in the season, a good, average one. The diseased bees were often dragged out when they were able to crawl back to the hive. Great numbers of them were were black and shiny, and looked as though they had been dipped in oil. The dragging-out process has been going on all the time up to the present. A very small number of bees now remain, but what few there are, have vim, and they do not seem to be discouraged. I have cleaned away the dead bees several times, and there is now quite an accumulation of them. They may have 2 pounds of honey in the hive. I examined the colony last evening, and found that the brood in all stages of development is not in proportion to the number of old bees. The queen seems to be quite prolific. I consider the colony of no value. In the season of 1880, I had a colony in my apiary that acted in the same way up to about July 1, when the trouble ceased, and the bees stored enough honey to winter on. The season here has been a poor one for honey and increase. We have had a great deal of rain up to within 3 weeks past, vegetation has been rank, and the prospect is good for a crop of fall honey. The bees are now out early in the day, and seem to be gathering honey. ISAAC SHARP.

Waveland, Ind., Aug. 20, 1884.

Preventing After-Swarms.

I have tested quite well Mr. Heddon's method of preventing after-swarms, and consider it a failure. It has caused several cases of very bad robbing. I always use the golden opportunity—just between sundown and dark—to discover robbing; also the first swarm will, sometimes for weeks, treat the bees of the old colony with suspicion. If I could not introduce young queens, I would shake off most of the bees in the old colony, and keep the entrance well closed for two days, and carry it away at once. Fall feeding is next in order, and I think that I have a method of feeding and an entrance to the boxes that will not be improved soon. CHARLES MITCHELL.

Molesworth, Canada.

Absolutely no Surplus Honey.

Cannot Mr. Doolittle or Mr. Heddon lend me honey enough to make a jug of vinegar? The silver lining hangs on the southeast corner of "the ragged edge of despair;" and unless we get a flow of honey from heart's-ease, we will have to fall back on sorghum molasses, in this section of the country. JAMES RONIAN.

Villisca, Iowa, Aug. 16, 1884.

Honey Crop Below the Average.

The honey crop here is below the average. White clover has yielded well generally, but the yield here was mostly from red raspberry bloom, and not enough for a taste from basswood. By close extracting I have managed to get 1855 pounds where last year the yield was 3,000 pounds, with about the same number of colonies, and the crop was ¾ basswood. I am satisfied from experiments last season, that a syrup made from granulated sugar is better than natural stores for wintering bees. I think it is well to have it stored in combs that contain no pollen, as breeding need not commence before the bees gather natural pollen in the spring. If pollen is detrimental for winter food, as I am inclined to believe, bee-diarrhœa will not exist, as it is very liable to do when natural stores are depended upon; and one, at present prices of sugar, can gain enough to well pay him for his labor. A very thick syrup can be made for 5 cents per pound. We have had an unusually cold July here, and it is cold now. Prospects fair for a fall crop. W. H. S. GROUT.

Kennedy, N. Y., Aug. 11, 1884.

Bees in Northwestern Nebraska.

With the experience which I have had with bees in Northwestern Nebraska, I think it is a very poor country for the apiarist. Take it on an average, bees gather just about enough honey to decently winter on, but they do well in swarming. I had 34 colonies in 1883, and received 380 pounds of comb honey, and 120 pounds of extracted. I have 54 colonies this season. They swarmed and seemed to do well until July 15. I had some very heavy swarms hanging out. It was getting late in the season, and I put on sections to keep the colonies from swarming. I put the sections on about July 1, the bees commenced to work in them, and worked until about July 15, when I noticed that they commenced robbing, and kept it up for about 15 days. They destroyed 5 colonies which had young queens that had not been mated with the drones. I closed the entrance of the hives so that but 2 bees could pass at a time, and then smoked those which appeared to be robbing the worst, but nothing seemed to do any good. They are working very hard now, and all seem to be in good condition. I use the double-walled hive, and I think that it is a very good one. I left them on the summer stands last winter unprotected by any wind-breaks, and the ground froze about 3 feet deep, but the bees came through all right. Until July 1, my bees swarmed and did better than ever before. I expected a good crop of honey, but I am afraid that it will fail. My bees are storing honey very fast at this time, and I am in hopes that the fall will be favorable, so that the bees can make up for lost time. I have about half a dozen colonies of Italian bees, and the balance are the native black bee. So far the black bees appear to be the best workers, but the Italians seem to build straighter combs.

ANDERSON GIBSON.

Ponca, Neb., Aug. 12, 1884.

Tree-Trunk Method of Wintering.

When I read an article like the one from the pen of Wm. F. Clarke, in the BEE JOURNAL of July 9, 1884, I feel like criticising it a little. I do not wish it understood that I am writing this against his method of wintering, for I am not; but I have known of bees dying in trees in winter, or at least they were all right in the fall, and in the following spring were dead. But of course this does not prove that they were winter-killed. That bees are sometimes winter-killed in trees, we have proof in Col. R. Walton's article on page 492. Mr. Clarke, in his article, devotes considerable space to "Bee-Life in a Tree-Top." Is it possible that Mr. C. never saw a bee-tree with the entrance near to the ground? If he has not, then the nature of bees is different here in Iowa; for out of some 50 bee-trees which were felled, and which I can now call to mind, 14 of them had entrances close to the ground, one was in a stump, and one in a log on the ground. In some of these trees the combs were actually built below the level of the ground. I am not writing this to get up a controversy with Mr. Clarke, as I would likely get the worst of it; but am merely telling facts as I have seen them.

J. W. BUCHANAN.

Eldora, Iowa, Aug. 11, 1884.

What is it?

Since my last letter, there have been heavy rains here, and the bees are doing better. They are bringing in a vast amount of pollen from corn, and working strongly on buckwheat, of which there is a large amount sown. I will describe as well as I can what to me was a curious scene: There are 140 colonies of bees ½ mile from here, working on 7 acres of buckwheat, 20 rods from the apiary. The bees cross the road over a rise of ground in a direct line to the buckwheat field. I was in the road at this rise of ground, looking at the thousands of bees flying in the air; it was about 7 o'clock in the morning, and the bees flying directly towards the sun, when my attention was drawn to what I at first thought was fine drops of rain, but upon close inspection I saw that it was a fine liquid spray or fine drops which was ejected from the bees. This was something new to me, and so I went back to my house and got my assistant, W. B. Smith, and returned, where we both saw it distinctly many times. I then went away 1½ miles and returned, and again saw it repeated. Now, what does this mean? What bearing does it have on the "dry feces theory?" Also on the pollen idea? If this is common, how can bees be confined to the hive for 5 months and their intestines not become distended and diseased, thus causing the dreaded condition of the bees which we call diarrhœa?

S. J. YOUNGMAN.

Cato, Mich., Aug. 4, 1884.

Only Half a Crop of Honey.

We have only about a half crop here. I began the season with 32 colonies, having lost 30 in the winter. I began to feed them on May 8, and got them in good condition by June 12. It was cold all through July, and for a month the bees have been idle; now it is hot and dry, but I hope for better times. Up to date I have taken off 950 pounds of comb honey of the best quality.

JOSEPH LEE.

Farmers, Mich., Aug. 16, 1884.

Bees Did Well on Basswood.

I commenced the season with 55 colonies, some of which were very weak. They have increased to 100 colonies, mostly by natural swarming. The first part of the season was quite favorable for brood-rearing until about July 1, when we had unfavorable weather 5 days, which almost entirely checked swarming. I obtained only about 500 pounds of extracted honey from clover, and that was all that they stored up to July 1. When basswood bloomed, my bees did well, and it lasted about two weeks; since then they have not made more than their living. I have in all about 4,500 pounds of honey, about 300 pounds of it being comb, and the balance extracted honey. We have just had quite a rain, and I am in hopes that we will have a little flow of fall honey.

A. C. SANFORD.

Ono, Wis., Aug. 18, 1884.

Not More than Half a Crop.

I have not yet seen any reports of the honey crop from this part of Michigan. We had an unusual heavy flow of honey-dew or aphidæ secretion during the month of June, but it is poor stuff, and a damage to the honey crop. I had 45 colonies in the spring; increased to 71 by natural swarming, and have taken 1,000 lbs. of comb honey in one-pound sections, mostly from white clover, and have extracted 500 lbs. Basswood was a complete failure, owing to cold, windy weather when it was in bloom. Buckwheat is coming into bloom, but it is not yielding much honey on account of dry weather. I hope that others are doing better.

E. W. WALES.

Disco, Mich., Aug. 16, 1884.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 25, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the price of honey, but demand is improving gradually. Extracted brings 6@9c on arrival, and choice white comb honey in sections, 15@16c.

BEESWAX—Is dull at 26@28c on arrival.

C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—Sales of comb honey continue slow. As yet there are no arrivals of this season's crop. We have received several small shipments of new extracted honey, which sold readily. For prices on this year's crop, we quote: Fancy white, 1-lb., 16@18c; fancy white, 2-lb., 15@16c; fair to good, 1 and 2-lb., 12@14c; fancy buckwheat, 1-lb., 12@13c; 2-lb., 11@12c. Extracted, white clover, in kegs or small barrels, 8½@9c; dark grades, 7@7½c.

BEESWAX—Prime yellow, 30@32c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in, and selling at 16@18c. for best white 1 and 2-pound sections. New extacted, 8@9c. Honey in unglassed sections sells the most readily. Old comb honey all gone.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY—The demand for comb is very light. The retailers have bought a little during this month; but say that they do not have any call for it at present. Prices range from 12@16c per pound for the different sized frames and style of packages. There is a continued dullness in extracted. Some of the new crop is on sale.

BEESWAX—Is dull, and 25c for dark, with 30@32c for yellow, is the range of prices.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—The market is devoid of any encouraging features to sellers. Offerings are numerous, there is no pronounced inquiry, and not a particle of competition among buyers. Some comb honey has been sold within the week at 7c, 8c, 9c and 10c for four different grades, the latter being extra choice. White to extra white comb, 9@11c; dark to good, 7@9c; extracted, choice to extra white, 5@5¼c; dark and candied, 4c.

BEESWAX—Wholesale, 25c.

STEARNS & SMITH, 423 Front Street.

KANSAS CITY.

HONEY—I have to report a little easier feeling in the honey market. Dealers generally have an idea that the crop is large and are not willing to buy more than for present demands, which are, as yet, comparatively light. Then, too, the immense crop in California and low prices there have a tendency to equalize the Eastern markets. Crops, except in the extreme east, I think, are not so light as is supposed, and there will be no scarcity in the Mississippi Valley. My last quotations are hardly sustained this week. I am trying to hold this market up, but small buyers are quoting country prices on me which compel some concessions. I think our bee-keepers will find it good policy in quoting prices to these occasional buyers, to hold a stiff margin of 2 or 3 c. on them, and when they do make a sale, it will count to their profit. But when they quote prices or make sales at about what their commission merchant or large buyers are getting, these fellows use it to beat down the prices in the regular channels, and it only reacts on the producers after all. I am in favor of the bee-keeper selling all he can around home and any where else when he can get a good price; but if he places himself in the field as a competitor of the regular honey merchant, he only pulls down the market on his own head.

BEESWAX—Nominal, 30@35c per lb.

JEROME TWICHELL, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c; in a small way 17c is occasionally obtained, but 16c would be the more reliable quotation; 2-lbs., best white, 14@15c; second quality slow at 10@12c. Extracted slow at 8@9c.

BEESWAX—30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

GEO. W. MEADE & CO., 213 Market

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We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

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While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, $2.00; Monthly, $1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar *they send direct to this office*, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and $6.00, we will make an *additional* present of a Pocket Dictionary, bound in cloth, containing 320 pages.

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* * *

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* * *

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* * *

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Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy 5 cts.; per doz., 40 cts.; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

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* * *

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

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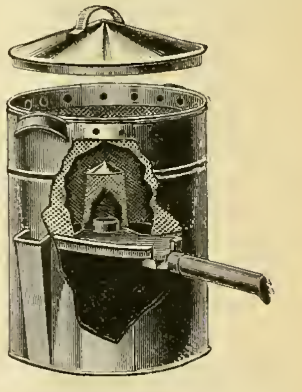

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It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

◆

To Indiana Bee-Keepers.

☞ Since Secretary Allen's notice on page 542, relating to the display of bees and honey at the Exposition in Louisville, from Sept. 4 to 6, I have conferred with Col. John F. Davis, Commissioner of Agriculture of Kentucky, and he has promised to give the following prizes, to encourage the display of Bees and Honey among the products of the State: Best comb honey, not less than 24 lbs., $5.00; best extracted honey, not less than 24 lbs., $5.00; best display of honey, $10.00; best colony of Italian bees and queen in observatory hive, $5.00; best display of bees and queens, $10.00; best collection of honey-producing plants and trees, cut specimens, $5.00. I may not have the list entirely correct, as I received it verbally from the Commissioner. We hope to meet many of the friends of bee-culture from other States, as well as from our own State, at our State convention at Eminence, Ky., on Sept. 2 and 3, and also at Louisville. G. W. DEMAREE.

Christiansburg, Ky., Aug. 21, 1884.

◆

☞ The semi-annual meeting of the Fayette County Bee-Keepers' Association will be held in Brush Creek, Iowa, on Sept. 9, 1884. This is to be a basket picnic held in the yard and lawn of B. F. Little. All who are interested are invited to attend. Come with your baskets well-provided, and we will have a whole day of enjoyment. B. F. LITTLE, *Sec.*

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

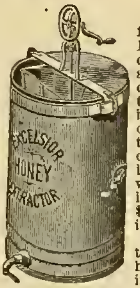
UNPARALLELED OFFER!

I have a fine 6-horse-p. Horizontal Engine and Boiler (new) for sale, for $300. I paid $425 for it, last year. Description and cuts free.
O. H. TOWNSEND,
35A1t Alamo, Kalamazoo Co., Mich.

EVERY BOY or GIRL

Who sends us eight 2-cent stamps (16 cents) and the names and address of ten boys and girls who love to read, will receive YOUNG AMERICA, a large 50-cent monthly, full of beautiful pictures, brilliant stories, poems, puzzles, etc., one year, free. Don't miss this rare chance, as this is the best and cheapest youth's paper in America. Address YOUNG AMERICA, Lock Box 675, Canal Dover, Ohio. 35A2t

EXCELSIOR
HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	..........$8 00
For 2 Langstroth "	10x18	"	.... 8 00
For 3 " "	10x18	"	..........10 00
For 4 " "	10x18	"	..........14 00
For 2 frames of any size,	13x20	"	..........12 00
For 3 " "	13x20	"	..........12 00
For 4 " "	13x20	"	..........16 00

ALFRED H. NEWMAN,
923 West Madison Street. Chicago, Ills.

W. Z. HUTCHINSON,
Rogersville, Genesee Co., Mich.,

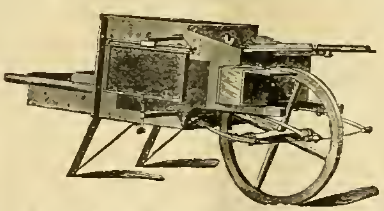
Is now making a specialty of rearing fine Italian queens. All queens bred from the purest and best of mothers, and the cells built in full colonies. Single queen, $1; 6 for $5; 12 or more 75 cents each. Tested queens, $1.50 each. Make money orders payable at Flint, Mich. He has a large stock of Queens on hand, and can fill orders by RETURN MAIL. 35Dtf

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published SEMI-MONTHLY, at Seven Shillings per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. Rev. H. R. PEEL, Editor.
LONDON, ENGLAND.

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

SYSTEMATIC AND CONVENIENT.



DAVIS' PATENT HONEY CARRIAGE,
REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only....... $18.00.

For sale by ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

WANTED.—Situation by a young man of some experience, as assistant or to take charge of an apiary. Good references can be given. Address, J. S. S., care Chas. F. Muth, S. E. cor. Freeman and Central Avenues, Cincinnati, O. 35A1t

HIGH-GRADE QUEENS.—In closing the Queen trade for this year, I have some fine high-grade "business" Queens, which will be sold for 40 cents each. Fine breeding Italian stock for sale. G. W. DEMAREE, Christiansburg, Ky.

TESTED QUEENS FOR $1.00.

ONE or more Tested Queens, $1.00 each. SIX unwarranted Queens for $4. Cyprian Queens crossed with Italians, at the above prices, and I claim that they are the best bees. I guarantee each Queen to be young and good.
J. F. HERSHEY, Mount Joy, Lancaster Co. Pa.
35A2t

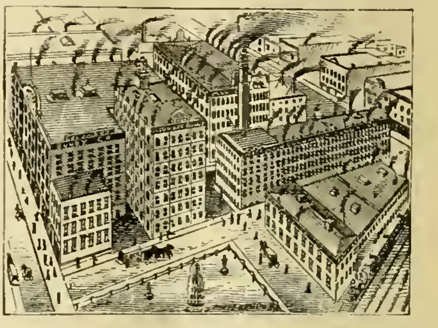
IF YOU WANT
—A—
VEHICLE,

SEND A POSTAL CARD TO THE
COLUMBUS BUGGY CO.
COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages,
Surrey Wagons,



AND OUR POPULAR
American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Foundation Mill.
6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by
ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL.

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to
FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.
4A1y

THE WORLD'S INDUSTRIAL AND COTTON CENTENNIAL

EXPOSITION

New Orleans.

Opening December 1, 1884; Closing May 31, 1885

— UNDER THE AUSPICES OF THE —

United States Government.

$1,300,000,
Appropriated by the General Government.

$500,000,
Contributed by the Citizens of New Orleans

$200,000,
Appropriated by Mexico.

$100,000,
Appropriated by the State of Louisiana.

$100,000.
Appropriated by the City of New Orleans.

From $5000 to $25,000,
Appropriated by Innumerable States, Cities and Foreign Countries.

Every State and Territory in the Union represented, and nearly all the Leading Nations and Countries of the World

The Biggest Exhibit, the Biggest Building and the Biggest Industrial Event in the World's History.

APPLICATIONS FOR EXHIBITS ALREADY RECEIVED COVER MORE SPACE AND A GREATER VARIETY OF SUBJECTS THAN THOSE OF ANY EXPOSITION EVER HELD

The cheapest rates of travel ever known in the annals of transportation secured for the people everywhere.
For information, address
E. A. BURKE,
Director General, W. I. & C. C. E.,
NEW ORLEANS, LA.

Syrian-Albino Queens !

My new Strain **AHEAD** of all. They build beautiful, straight Combs, **without Separators**, and are **UNEXCELLED** as workers. Reared by Alley's method.

Select-Tested, to breed from $3.00
Untested $1.50

Address, **DR. G. L. TINKER,**
30Atf New Philadelphia, Ohio.

GREAT SAINT LOUIS FAIR,

October 6th to 11th, 1884,

OPEN TO THE WORLD

Entries, Spaces, Stalls and Pens Free to all Exhibitors.

$50,000 CASH PREMIUMS !

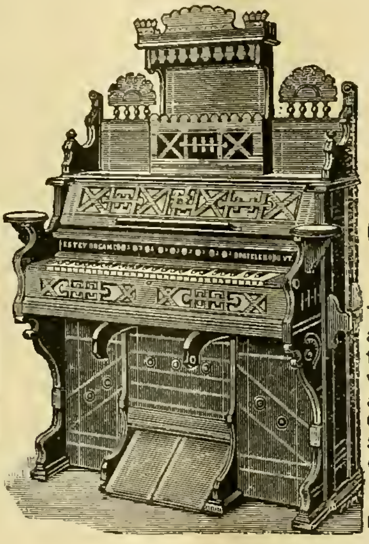
APIARIAN Exhibits the LARGEST in the World !

HALF-FARE RATES on all Roads during the Fair.

REGULAR LIVE-STOCK SALES DURING THE FAIR.

☞ For Illustrated Premium Lists, or information, address the Secretary. ☜

FESTUS J. WADE, Secretary. CHARLES GREEN, President.
35A4t



BUY AN ESTEY ORGAN

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,
188 and 190 State St., CHICAGO.

Prices Reduced.

Owing to a decline in the price of Beeswax there will, hereafter, be a reduction of

5 cents per pound

on all orders for Comb Foundation,

I pay **28c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

ALFRED H. NEWMAN,
923 West Madison St., CHICAGO, ILL.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

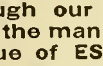
Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

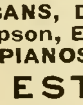
$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.



The long-lost Friend. This rare and curious book contains all the secret arts, charms and remedies for man and beast, as practiced by the famous John George Hohman during the 17th Century. For circulars, address, B. G. STAUFFER,
Box 14, Buchmanville, Pa.
35A1t

1868. 1884.

HEDDON'S
COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, high-board fence and ½ acre of ground in a small village, only 25 rods from Depot, freight, express and telegraph offices; sawmill, store and blacksmith shop, six miles from here, on this M. C. R. R. Good cellar, cistern, and two wells.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from	$ 3 00
Untested	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
WAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition
OF
BEES and HONEY,
OR THE
Management of an Apiary for Pleasure and Profit; by
THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

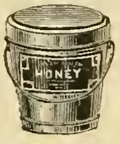
☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

A PRIZE, Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

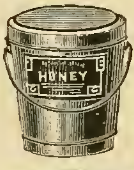
J. W. ECKMAN,
DEALER IN
Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

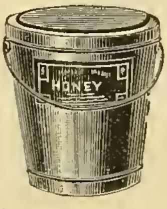
AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK C ., Portland, Me. 4A1y



NEW
HONEY PAILS



The accompanying illustrations show a nest of pails with the sides tapering, for marketing extracted honey. The covers are deep and the pails are made with special reference to filling them for the retail honey-trade. They are made in a superior manner and are quite attractive in appearance, when filled and nicely labeled.



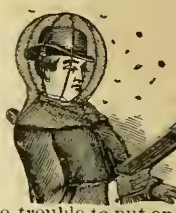
	4 lb.	7 lb.	13 lb.
Per doz.	$1.25	$1.60	$2.00
Per 100	8.00	10.00	14.50

A. H. NEWMAN,
CHICAGO - - ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
ABtf **J. VANDERVORT, Laceyville, Pa.**

A NEW BEE-VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

ALFRED H. NEWMAN,
923 West Madison Street. Chicago, Ill.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid .. ..in May and June, each	$ .50
Italian—untested—not warranted, in May and June, each	1.00
Italian—warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM.
MAYSVILLE. KY.
37A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.
Apply to C. F. MUTH,
976 and 978 Central Ave., CINCINNATI, O.
☞ **Send 10c. for Practical Hints to Bee-Keepers.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Notice This!

After Aug. 20, I will send by return mail a beautiful tested Syrian or Italian Queen, and one of my combined Drone and Queen Traps, or a copy of the Bee-Keepers' Handy Book, on receipt of $2.00: without book or trap, $1.50 each. Warranted Queens, $1.00 each. Select tested, $3.00. Safe arrival guaranteed, by mail.

HENRY ALLEY,
33Atf WENHAM, MASS.

65 *ENGRAVINGS*
THE HORSE,
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

LOCAL REPORTERS WANTED.
We want an agent and local reporter in every community to represent **City and Country**, and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A18t

ITALIAN QUEENS, DADANT FOUNDATION, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11A26t

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., September 3, 1884. VOL. XX.—No. 36.

THE WEEKLY EDITION
OF
THE AMERICAN BEE JOURNAL
PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **$1**.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

◆

FOREIGN POSTAGE, EXTRA:

To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the Chicago P. O. as Second Class Matter.

ADVERTISING RATES.

20 cents per line of space, each Insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* **7** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, space, for each insertion

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

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◆

☞ The Illinois State Fair for 1884 will be held at Chicago, upon the extensive and finely improved grounds of the Chicago Jockey Club, adjoining Garfield Park. The Fair will be held from September 8 to 13. A show of Fat Stock will be held in the Exposition Building, Chicago, Nov. 11-20, under the auspices of the Board.

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

◆

To Kentucky Bee-Keepers.

☞ Since Secretary Allen's notice on page 542, relating to the display of bees and honey at the Exposition in Louisville, from Sept. 4 to 6, I have conferred with Col. John F. Davis, Commissioner of Agriculture of Kentucky, and he has promised to give the following prizes, to encourage the display of Bees and Honey among the products of the State: Best comb honey, not less than 24 lbs., $5.00; best extracted honey, not less than 24 lbs., $5.00; best display of honey, $10.00; best colony of Italian bees and queen in observatory hive, $5.00; best display of bees and queens, $10.00; best collection of honey-producing plants and trees, cut specimens, $5.00. I may not have the list entirely correct, as I received it verbally from the Commissioner. We hope to meet many of the friends of bee-culture from other States, as well as from our own State, at our State convention at Eminence, Ky., on Sept. 2 and 3, and also at Louisville. G. W. DEMAREE.
Christiansburg, Ky., Aug. 21, 1884.

◆

☞ The Progressive Bee-Keepers' Association meets on the first Saturday in October, 1884, at Bedford, O. A general invitation is given.
J. R. REED. *Sec.*

◆

Look at Your Wrapper-Label.

X SUBSCRIBERS whose papers reach them with this paragraph marked with a *blue* pencil, will please take notice that their *subscriptions will expire at the end of the present month*. Such are marked thus on the label, "Sept. 84." We do not want to lose any of our subscribers, and give this notice so that all may get every number of the BEE JOURNAL without any break, and no papers will be missed. When the money for renewal is received at this office, the date on the label is changed to correspond, and this change is your receipt. If there is any mistake made, notify us at once.

DADANT'S FOUNDATION

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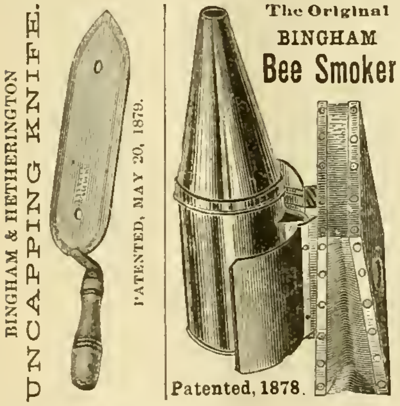

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50 cents.**

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

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Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., SEPTEMBER 3, 1884. No. 36.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

The Bee Journal for 1885.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2 00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

☞ Sir John Lubbock is attending the great gathering of the British Scientists at Montreal. Sir John has devoted much attention to bees, and is justly regarded as one of the greatest men of this age.

☞ A new and revised edition of "Quinby's New Bee-Keeping" has just been published. It has been re-written by Mr. Quinby's son-in-law, Mr. L. C. Root, and is "fully up with the times." We keep a stock for sale at the publisher's price, $1.50.

☞ The Toronto Exposition will be held from Sept. 10 to 20, 1884, and as usual will be very attractive. The Bee and Honey Show has the honor of being the largest, not only in Canada, but in America.

☞ The California *Grocer* of Aug. 22 remarks as follows upon the honey market: "Many tons of new honey have already been shipped East from the southern counties, and our local market is very fully supplied. Sales of new crop are only affected through the most liberal concessions. It is surprising that experienced bee-keepers will persist in sending their honey forward so early in the season as to ruin a prospect for a good market."

☞ Relative to Mr. F. H. Hunt, of Centre Point, Iowa, having placed glucosed honey on the markets of Iowa and Nebraska, some remarks were made on pages 424, 475 and 492. Mr. Hunt has sent a reply for publication, which, on account of its offensive personalities, we deem it advisable to sum up thus: He denies having sold any impure honey, and avers that the honey, spoken of on page 475, was by analysis proven to be unadulterated. This much should be given in his defense, but we cannot burden the BEE JOURNAL with unpleasant matters growing out of personal animosities, which, by Mr. H.'s reply, would seem to be largely mixed up with the matter.

☞ In reference to the holding of the next meeting of the National Convention at New Orleans, as suggested by Mr. Viallon, Dr. C. C. Miller writes as follows:

DEAR EDITOR:—On page 548 you suggest the postponement of the National Convention for 2 months, and its removal to New Orleans. According to the constitution, the place of meeting is to be fixed by vote of the Society, and having been thus fixed, it seems that the officers have no discretion in the matter, but the Society, at its Rochester meeting in October, can decide upon the time and place of holding the succeeding meeting. C. C. MILLER, *Sec.*

☞ A strange complaint has just been received. It says that the writer had sent $2 to a subscription agency in New York for the BEE JOURNAL for one year, and has not received it. We have never heard of the agency before, and we *wonder* why it is that persons persist in sending subscriptions to parties they do not know, instead of sending them direct to this office. It is often a source of annoyance and loss to do so. Let us impress it upon all who desire to take the BEE JOURNAL to send subscriptions direct to this office, unless they know the parties well enough to trust them with their money.

☞ The Indiana State Fair will commence on Monday, September 29. The entry books, except in the speed ring, will close on the Saturday previous. All stock and articles must be in place on Monday forenoon of the first day. Experience has demonstrated the importance of promptness and early preparation. Special attractions will be provided to make each day equally interesting. It will be strictly an Agricultural Fair and Farmers' Annual Festival.

☞ Mrs. Sarah, relict of the late Lockwood Pringle, died at the residence of her son, Allen Pringle Esq., of Richmond, Ont., on July 22, at the advanced age of 73 years. Deceased was strong and unusually active up to within a very short period of the close of her life. She was widely known in the community and universally esteemed.

Extracted vs. Comb Honey.

Mr. F. L. Dougherty in the Indiana *Farmer* argues the point thus:

The present season's work will be convincing to a majority of bee-keepers; that is, the season will determine which will be the most profitable to produce, extracted or comb honey. In our own immediate vicinity, the amount of comb honey is very meager, while those who worked for extracted honey report a very fair crop.

We have been long convinced that for the best results, comb honey exclusively could not be depended on. Even during the best seasons we not unfrequently find colonies that are slow to start in sections, losing half the season before they get fairly started, whereas, if plenty of empty combs be given them, as in a hive fixed for extracting, they go to work with surprising vigor. After they have worked for a few days in the upper frames, if these be removed and the sections substituted, they will generally enter them without further trouble. There are exceptions to this rule, however; for we have had colonies that would not go into the sections and build comb, with any amount of coaxing.

The outlook at the beginning of the present season was flattering in the extreme, and we had reason to expect a good harvest; and in many localities the yield from white clover was quite good, but, on account of the previous bad weather, the bees were not in condition to gather it. At the beginning of the honey flow from clover, when the hives should have been full of brood, the combs were almost empty. Consequently all the honey gathered at the beginning was stored in the brood-combs, to the detriment of the colony, as the queen soon became cramped for room in which to lay. When these full combs were removed and empty ones returned, this made but little difference, as the honey was easily thrown out with the extractor. But when comb honey alone was the object sought, this plan would not work so well. Again we find that when bees are allowed to begin the storing of any great amount of honey in the brood-nest, they will keep it, to a greater or less extent, the entire season; or, in other words, a colony that is allowed to cramp the queen once, is very likely to continue it throughout the season.

Again, this teaches us that very much depends on the control which is had over the brood-nest, during the early preparation of the colony for the summer's work,—such control as can be had only by the use of division-boards, reducing the size of the brood-nest to the necessities of the colony, enlarging it only to satisfy the demands of the queen, and so managing the brood-chamber, that at the commencement of the honey-flow, it will be entirely filled with brood, leaving but little space if any in which the bees may deposit honey, but forcing them directly into the sections for the necessary room in which to store it. This we think is the only manner in which comb honey can be secured with any certainty, but, during a season like the past, it is almost impossible to secure this end before the honey-flow ceases; consequently the extractor must be brought into use or a major part of the crop is lost.

* * *

Bee-Keeping in England.

The London Daily *Telegraph* of July 22, 1884, points out the many improvements in bee-keeping that have been made within the past decade—many of them even since we visited Europe, in 1879, in the interests of bee-culture. We are glad to welcome our Cousins to a higher grade of apiculture. The *Telegraph* says:

Bee-Keeping as an industry of substantial importance gains ground every year, and the hope expressed by the spokesman of the Central Society, at their latest meeting, that every county would soon have its branch organization, bids fair to be fulfilled. During the six years that have elapsed since the Baroness Burdett-Coutts became one of the Presidents of the "British Bee-Keeping Association," the prosperity of apiculture has been very marked, for in the interval, scientific ingenuity has been so successfully directed to the improvements of hive-construction and the methods of taking the combs that, to quote the paper which was read at the meeting referred to above, "the bee-keeping of to-day no more resembles that of the past than a railway train resembles a carrier's cart."

Indeed, there are not, probably, many Societies which in a single decade of existence can point to more material results, and the very bees themselves, if they could compare the present with what has gone before, would be amazed when comparing the old "go as you please" procedure in the straw-hive—when the colony had to be murdered before their honey could be taken, and fifty per cent. of their best work was wasted and thrown away. They can now look around at the commodious and charming structures of wood and glass in which they are invited to store their sweet harvest, and prepare for it with a regularity and geometrical accuracy that must be eminently delightful to these small winged Euclids of orderly angles. Their lines are laid down for them in wax, and each sheet of comb is in width and depth and length exactly the same as the next, so that disparity, the bees' abomination, is impossible, and mathematical exactness, their passion, is invariably insured.

Still more to the point, perhaps, is the fact that now, bee-keepers do not suffocate their colonies whenever they wish to move them, or murder them whenever they wish to rob them of their harvests. For such a reform as this all bees should be truly grateful, and, if the truth were known, they probably are.

Great, however, as has been the expansion of this industry, there is room enough in Great Britain for an enormous increase. The initial expense, trifling though it may seem, is sufficient in many cases to deter experiment, and, strange as it may appear, local superstition has, in some places, an effect in setting the country-folk against the industry. But the British Bee-Keeping Association is going the right way to work; for assistance in money to those who wish to start in the enterprise and cannot afford to do so, with liberal prizes and substantial encouragement in the direction of cheapening hives and the best apparatus of the apiarist are, after all, the only methods by which this remunerative occupation can be popularized and established.

From other aspects than the money one—and there are many who are ready to confess that they recognize other than material aspects in a commercial undertaking—the culture of bees abounds in interest. Quite apart from the natural history of the insect—which sufficed, it may be remembered, for the life-long study of a great mind, and yet was left unexhausted by his researches—the tradition and folk-lore of the hives are of extraordinary abundance and most curious character. In its literature the sympathetic connection supposed to exist between bees and their owners—indeed, between the insects and humanity—forms a very curious and pleasant chapter of rural superstition.

Quarrelsome people need never try to keep bees, nor should any one hope to find honey in hives, who trespasses upon a neighbor's land-marks. If a bee comes into a house, it must not be treated like a wasp, but deferentially encouraged to go out. They hum a hymn of joy, it is said, on Christmas Eve, and on Good Friday store no honey. They love children, and share with the swallow the pretty distinction of being the returned spirits of the little ones. They are emphatically the friends of man, both in the sentimental fancies of literature and the practical results of their exemplary industry.

* * *

Convention Notices.

☞ The Western Bee-Keepers' Association will hold its second annual meeting in Independence, Mo., Wednesday, Thursday and Friday, Sept. 24—26, 1884. The Association will endeavor to make this the most instructive and interesting meeting it has yet held, and will spare no pains within its means to make it in every sense valuable to all.

C. M. Crandall, *Sec.*

* * *

☞ The bee-keepers of Hancock county, Ohio, met in Findlay, on Aug. 9, 1884, and organized an association to be known as the Hancock County Bee-Keepers' Association. Twenty-two persons became members by paying the dues, 25 cents. The Association meets again on Sept. 20, 1884, at the Court House in Findlay, at 10 a. m. Bee-keepers are cordially invited to attend. Sam'l H. Bolton, *Sec.*

P. A. Riegle, *Pres.*

Local Convention Directory.

1884. *Time and place of Meeting.*

Sept. 4.—Southern Indiana, at Madison, Ind.
Dr. Firth, Sec.

Sept. 9.—Fayette County, Iowa, at Brush Creek, Ia.
B. F. Little, Sec.

Sept. 13.—Union, Western Iowa, at Dexter, Iowa.
M. E. Darby, Sec.

Sept. 17.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburgh, Ind.

Sept. 24-26.—Western, at Independence, Mo.
C. M. Crandall, Sec.

Oct. 1, 2.—Cedar Valley, Iowa, at Waterloo, Iowa.
H. O. McElhany; Sec.

Oct. 3.—N. Ind. and S. Mich. at Goshen, Ind.
F. L. Putt, M. D., Sec.

Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mic

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

A New Estimate of the "Busy Bee."

Under the above heading the *London Sporting Times* gives the following article, which shows either the ignorance or stupidity of the writer, or else it was written for the same purpose as other nonsense with which the daily papers are filled now-a-days. The *Times* says :

There is no insect more thoroughly objectionable than the bee. It is even more disgustingly active than the ant. At the first dawn of day the bee sets off to hunt for honey, and continues at the sticky occupation until night. So far as is known, the bee receives no salary whatever, but works either to pamper the pride of a fat and useless queen, or because it is a prey to a miserly passion for heaping up honey. In the former case the bee deserves the contempt of all free men, and in the latter, it displays a loathsome mental and moral degradation. In either case the bee's willingness to do unnecessary work is an insult to intelligent human beings.

Scientific persons are fond of telling us of the bee's tremendous geometrical knowledge, and parade in proof thereof the fact that it builds hexagonal cells, thereby packing the greatest number of cells with the smallest possible amount of wax within a given space. They fail, however, to notice that there is no law requiring bees to build their preposterously little cells. If these were really intelligent insects, and knew the comparative value of wax and honey, they would build cells holding a pound of honey each, and thus enable a human being to eat honey without at the same time filling up the interior of his person with wax. This simple plan has never yet occurred to the bees. They go on building their antiquated and clumsy cells without once undertaking to improve upon them. They may be intelligent, but they do not improve it by adhering to a pattern of cell invented by their antediluvian ancestors.

To hold up these miserly and wantonly busy insects to the admiration of mankind is a positive outrage. Dr. Watts, who openly forbade all interference with dog-fights, was in the constant habit, when he met a bee, of politely inquiring, "How doth the little busy bee!" thus treating the insect with a courtesy which would not be out of place if extended to a bishop. The pernicious influence of Watts in this matter has been widespread and enduring.

It is time that a protest should be made against the bee, and that mankind should henceforth be taught the plain and obvious truth that an insect which spends its whole existence in working and stinging is even more unworthy of emulation than is the mosquito or the book agent.

The National Convention.

☞ The date for holding the next meeting of the North American Bee-Keepers' Society, in the city of Rochester, N. Y., has been fixed for Oct. 28, 29 and 30, 1884. At the last meeting of the Northeastern Bee-Keepers' Association a committee was appointed to secure a Hall and make other necessary arrangements for this meeting. Knowing the men who compose this committee, we can assure all who are interested, that the matter is in good hands, and that everything will be arranged for one of the best meetings ever held by the Society. Rochester is one of the finest cities in the United States, and this should be an enjoyable meeting for all who are interested. We hope soon to announce a complete programme. C. C. Miller, *Sec.*
L. C. Root, *Vice-Pres.*

☞ The semi-annual meeting of the Fayette County Bee-Keepers' Association will be held in Brush Creek, Iowa, on Sept. 9, 1884. This is to be a basket picnic held in the yard and lawn of B. F. Little. All who are interested are invited to attend. Come with your baskets well-provided, and we will have a whole day of enjoyment. B. F. Little, *Sec.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on the second Saturday in September, at 9:30 a. m. This Association is doing a good work, and bee-men in Western and Central Iowa would do well to avail themselves of its benefits. M. E. Darby, *Sec.*

☞ The Cincinnati Exposition of this year, the twelfth in the series, opens September 3 and closes October 4—one month. Every facility of low rates on railroads and by boat are offered to the stranger to visit the city. Exhibitors, and any others seeking fuller information, may address the Secretary, who will furnish rules, regulations, premium lists, etc.
J. F. Walton, *Sec.*

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Sept. 1, 1884

The following are the latest quotations for honey and beeswax received up to this hour :

CINCINNATI.

HONEY—There is no change to note in the price of honey, but demand is improving gradually. Extracted brings 6@9c on arrival, and choice white comb honey in sections, 15@16c.

BEESWAX—Is dull at 26@28c on arrival.
C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations : Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c. ; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11½@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.
McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in, and selling at 16@18c. for best white 1 and 2-pound sections. New extucted, 8@9c. Honey in unglassed sections sells the most readily. Old comb honey all gone.

BEESWAX—35c.
Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—The demand for comb is very light. The retailers have bought a little during this month; but say that they do not have any call for it at present. Prices range from 12@16c per pound for the different sized frames and style of packages. There is a continued dullness in extracted. Some of the new crop is on sale.

BEESWAX—Is dull, and 25c for dark, with 30@32c for yellow, is the range of prices.
R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY—There is plenty offering, mostly of ordinary quality, and very little demand. There is some inquiry for choice and extra white extracted for shipment at not to exceed 5c. White to extra white comb, 9@11c; dark to good, 9c; extracted, choice to extra white, 4½@5c; dark and candied, 4c.

BEESWAX—Wholesale, 25c.
Stearns & Smith, 423 Front Street.

KANSAS CITY.

HONEY—I have to report a little easier feeling in the honey market. Dealers generally have an idea that the crop is large and are not willing to buy more than for present demands, which are, as yet, comparatively light. Then, too, the immense crop in California and low prices there have a tendency to equalize the Eastern markets. Crops, except in the extreme east, I think, are not so light as is supposed, and there will be no scarcity in the Mississippi Valley. My last quotations are hardly sustained this week. I am trying to hold this market up, but small buyers are quoting country prices on me which compel some concessions. I think our bee-keepers will find it good policy in quoting prices to these occasional buyers, to hold a stiff margin of 2 or 3 c. on them, and when they do make a sale, it will count to their profit. But when they quote prices or make sales at about what their commission merchant or large buyers are getting, these fellows use it to beat down the prices in the regular channels, and it only reacts on the producers after all. I am in favor of the bee-keeper selling all he can around home and any where else when he can get a good price ; but if he places himself in the field as a competitor of the regular honey merchant, he only pulls down the market on his own head.

BEESWAX—Nominal, 30@35c per lb.
Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY — Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.
W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c; in a small way 17c is occasionally obtained, but 16c would be the more reliable quotation; 2-lbs., best white, 14@15c; second quality slow at 10@12c. Extracted slow at 8@9c.

BEESWAX—30c.
A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.
Geo. W. Meade & Co., 213 Market

CORRESPONDENCE

For the American Bee Journal.

Those Virgin Queens.

G. M. DOOLITTLE.

From the many letters of inquiry which I am getting, I do not think I can please the readers of the BEE JOURNAL better than to tell them just how I work from beginning to end, in getting and introducing my virgin queens; and as I have not lost a single queen this season, in using the plan, it speaks well for it, considering that we have had the worst season here for the queen-business that I have ever known.

First, I get the queen-cells which are generally matured by natural swarming or on the Alley-plan. When these cells are nearly ready for the young queens to hatch from them, I make a queen nursery as follows: Sixteen blocks are gotten out, 2⅝ inches by 2⅝ by 1 inch, which blocks exactly fill one of my frames; a 1½-inch hole is bored in the centre of each of these blocks, over which is tacked a piece of wire-cloth having 12 meshes to the inch, and being 2 inches square. Before tacking on the wire-cloth, I bore in one edge of the block (which is designed for the top after the block is put in the frame) a ¾-inch hole, boring it down to within ⅛ of an inch of the 1½-inch hole. I now finish boring the hole with a ½-inch bit. This hole is for the queen-cell to be placed in, and the reason for the two sizes of holes is to give a shoulder so that the queen-cell can hang in the block the same as it does on a comb, and still be in no danger of slipping through into the block. This hole is bored a little to one side of the centre, so as to allow room for a ½-inch hole on the other side, which hole is to receive the candy (the same as made for shipping-cages) on which the young queens feed. This ½-inch hole is so bored that it comes out near one side of the 1½-inch hole, and when it is deep enough so that a hole large enough for the queen to enter is made, stop boring: for we need a shoulder at the bottom to keep the candy in place.

Now fill the hole with candy, packing it in with a 7-16-inch plunger, and tack on the wire-cloth when the blocks or cages are ready for the cells. Cut the cells off of the comb very carefully, for if handled roughly, I find that the queen will either not hatch at all or else she will have an imperfect wing or leg. Trim the base of the cell till it will go easily into the ¾-inch hole, and just before placing it in the cage, take a little honey and put it around the point of the cell just where the queen will gnaw through in hatching from the cell. I formerly found many dead queens in the cages, and wondered at it, till by watching, I found that as soon as a queen got a small opening through the cell, she would put out her tongue and the bees would feed her, thus giving her strength to become quite active as soon as she hatched; while if not thus fed, she would be very weak, and often-times would die. By placing the honey around the point of the cell, the queen is fed the same as if the bees had access to the cell, and it is a rare thing that I now find one dead in the cage.

After the cells are all in the cages, the frame made to receive them is placed on a board having a cleat nailed on it, when it (the board) is stood up nearly perpendicular, so that the frame rests on the cleat. Now put in the cages as carefully as possible, so as not to jar them, remembering always to keep the cells in the same upright position that they occupied in the hive.

When all are in, the frame of cages or queen-nursery is to be hung in a populous colony in place of one of the central frames of brood. In all these operations with queen-cells, the temperature of the place where you work should be from 85° to 95°, for a lower temperature will darken the color of the queens, and otherwise injure them, if exposed to it any length of time.

This nursery is used year after year, the only precaution necessary being to see that the candy in the ½-inch hole is kept fresh and moist by renewing or placing a little honey on the top of it, so it can soak through every time a new lot of cells are placed in it. The blocks can also be varied to suit any sized frame, or meet the notions of the most fastidious. If all has been done as it should be, you will find in 48 hours, upon lifting it from the hive, a nursery full of as bright lively queens as you ever saw, when the next thing to be done is to get them introduced where you wish them, or into nuclei if you are engaged in the queen-business.

For an introducing-cage, I take a piece of wire-cloth 4 inches square of the same kind as before mentioned, and roll it around a ¾-inch rod which gives me a tube, after the sides are sewed together, 1¼ inches in diameter by 4 inches long. Into one end I fit a permanent stopper, and for the other end I make a plug 1¼ inches in diameter by 1½ inches long. In the centre of one end of this I bore a ⅞-inch hole 1 inch deep, which is to receive a piece of comb cut from a frame of unsealed honey, which piece of comb should just fit the hole, with the cells standing endwise toward the cage, when this stopper is put in.

I at first used the same food in these cages that I used in the nursery, but often having nearly ½ of the queens die in the cages, I adopted the above, and have not lost a single one since. To cut these pieces of comb, I make a punch of tin of the right size, and long enough to be convenient, which is ground sharp at the lower end before the tin is rolled up. If it is ground all from one side, and the ground side left on the outside, you will not be bothered with the piece of comb becoming wedged in the punch. To use the punch easily, twirl it around at the same time you push down. To get the queens out of the nursery-cages into the introducing-cage, I place the nursery-cage near a window and remove the now empty queen-cell, placing the open end of the introducing-cage over the hole which is opened by the removal of the cell. If the queen should not readily run up into the cage (a thing she seldom fails to do), I leave the cages in place and fix the next one in the same way, and so on, taking care of each queen as soon as she enters the introducing-cage, by putting in the provisioned stopper and placing her in a basket. To secure the best results, the queens should be about 3 days old when placed in the introducing-cages, but a difference of two days either way will make no great difference.

Having as many queens in my basket as I wish, I go to the bee-yard, catch the queen which I wish to supersede, place one of the cages containing a virgin queen on top of the frames, and close the hive. If a honey-board is used instead of a quilt or sheet of enameled cloth, the frames will have to be spread apart and the cage placed between the combs. I now mark the hive by some means which will tell me that a queen is caged, and the date, when I wait five days; at the end of this time I go to the hive, raise the quilt and remove the provisioned stopper from the cage, when the hive is again closed and the queen allowed to go out whenever she chooses, as it is a shorter job than it is to wait for her to go out while you are there, for some of them are persistent in sticking to the cage, especially if a worker-bee enters the cage before the queen goes out.

I told you when I wrote on this subject before, that in five minutes after the release of the queen, I had seen her and the bees destroying the queen-cells, which was true, and up to July I found all cells destroyed in 24 hours after the queen was released; but as soon as the honey began to come in, I found that a part of the colonies would keep their cells and not destroy them; so in 24 hours after I take out the stopper, I look over the combs and cut off the queen-cells when not destroyed. I left some to see what would become of it, and the young queens were not molested till after they were fertilized, when, upon the hatching of a queen from the cells they had protected, they drove out the fertilized queen and held to the young one. In one case the queen went to laying with the first hatched queen in the hive, and was taken out after she had been laying 5 days, when in 5 days more the other was laying; so I had two laying queens from a nucleus in 5 days; but it does not generally work in that way, so I destroy the cells as given above. By using the above plan, I have secured a laying queen from a nucleus every 8 to 10 days during this season, which is quite a saving of time over the old or cell-plan.

In not a single case out of several hundred have I had a virgin queen killed, except by leaving the cells in as I told you of, and then not till the young queen had hatched, so there were two queens in the hive. No bees are ever placed in the cage with the queen as some have suggested, and I believe it not wise to do so. I believe I have now answered all of the questions asked, and hope that it is plain enough so that all can understand it.

Borodino, N. Y.

For the American Bee Journal.

"What is It?"

C. H. COGSWELL.

Mr. Kemp, on page 536, attempts an explanation of the phenomonon called "honey-dew." He repudiates the "aphidæ theory" and claims that it is a result of "aromatic exhalations of flowers, etc." If I understand him, he argues that there is not an "aromatic" but a saccharine exhalation or evaporation from flowers, which, under favorable conditions, becomes so concentrated as to condense in the form of "honey-dew" on leaves, etc.

Now, will some of the scientists tell us whether the saccharine substance of honey—the sugar—evaporates or passes into the atmosphere in the form of insensible vapor? or is it the case with a saccharine fluid as with brine, that the water evaporates leaving a residuum of sugar (or salt) remaining? The vapor that rises from the ocean returns in the form of fresh water, and the vapor that rises from the honey-cavity of flowers, or from uncapped combs in the process of "ripening," is probably only a surplus of water, with no sensible trace of sweetness about it.

I will give one reasonable ground for believing that Mr. Kemp has not hit the true theory of "honey-dew." He says: "Honey-dew is formed only on hard, smooth, glazed leaves, such as the poplar, oak, and others." Others probably includes maples (silver), for it was very abundant on some of these trees along our streets this season, so plentiful as to drop off and thickly sprinkle the sidewalks. I noticed, however, that while it was very abundant on some silver maple trees, it did not appear on others near, or on the opposite side of the street. If it was a saccharine condensation in the atmosphere, why did it affect one tree abundantly and not appear at all on another tree with the same kind of leaves and only a few yards distant? I further noticed that all those trees, upon which I saw "honey-dew," were covered with the "scales" and "cottony" substance (spoken of by Prof. Cook and others) on the under surface of the limbs. There were no scales where there was no honey-dew, and *vice versa.*

Further, the foliage of the trees upon which there was "honey-dew" is now dark-colored and rusty, as if sprinkled with soot from coal-smoke, and the trees look old and sickly. On my own place, 1½ miles from town, which is largely given to orchard, nursery and groves in which maple abounds, no scale-lice nor "honey-dew" appeared.

As matters of theory and observation, I am constrained to believe that the weight of evidence is still with the scientists, though my neighbor says that he has seen all the leaves in a Missouri forest covered with "honey-dew," and no lice; but then, my neighbor, though positive, is not a close and critical observer.

Virden, Ill.

For the American Bee Journal.

Is Honey Poisonous?

DR. G. L. TINKER.

By request I have prepared this article in reply to the following questions concerning the effects of honey:

Is it a fact that honey is poisonous to some people? I have heard that a certain lady who ate some honey, died of its effects in a very short time; also, that it produces colic in some people who eat it. Is there any truth in these assertions? Is it possible for honey to produce death? and, if so, from what cause?

A Lover of Honey.

There are several interesting facts relative to the ill-effects of honey on the digestive organs of many persons. It cannot be said, however, that honey is in any sense "poisonous." There is perhaps one exception in the case of the honey from the *Kalmia latifolia* or sheep-laurel, also called mountain-laurel, lambkill, etc. The beautiful shrub from which the honey is produced, is from 5 to 10 feet high, and is found in all the Atlantic States, Pennsylvania, Ohio, West Virginia and Kentucky, growing on rocky hills, and on the bluffs along rivers, etc. It is not plentiful, but occasionally forms dense thickets. The leaves are evergreen, leathery, and very smooth. The flowers are numerous, white, or rose-colored, and bloom in June.

Laurel honey is capable of producing severe effects if eaten too freely, such as headache, impaired vision, difficulty of breathing, sickness at the stomach, and diminished circulation with coldness of the extremities. Its effects are readily counteracted by a good stimulant like whisky.

The leaves of the shrub have proven a valuable remedy in the practice of many physicians, and the honey would, no doubt, prove very useful in moderate quantities in many diseases, if it could be obtained. We believe that it would be exceedingly rare to find it in the market.

The ill-effects of honey on some persons are due, almost without exception, to the small amount of acid which all honey contains, and which gives it its characteristic flavor.

Where honey disagrees with a person, it is a certain indication of weak or impaired digestion, of dyspepsia in fact. The worst cases of dyspepsia that I have ever seen, were those who complained in the early stages of their affection, that honey disagreed with them. My advice to all who cannot eat good honey without bad effects, is to apply to some good physician at once for treatment for dyspepsia. No one in these times, when it is so cheap, can afford to forego the luxury of eating honey.

The "reason why" it disagrees, is probably because in all cases of slow or weak digestion, acid products arise which have much to do with the discomforts of dyspeptics. Taking the acid contained in the honey only adds to their troubles in digestion, and hence, it is said to "disagree" with them, and this disagreement is often manifest in colicky pains. We do not know that eating honey while warm will cause colic, and do not think it ever would in a healthy organization. Doubtless warm honey would soonest effect an impaired stomach, as all warm fluids taken into that organ take effect sooner than cold ones.

I would not say that eating honey might not under some circumstances lead to serious results, for some poor dyspeptics may have already as much disorder as can be borne; and to add to that disorder, just a little more disturbance would be to turn the scale against them. But there are numbers of other agents in general use for food that would opperate in a similar way in such a case. Hence, to say in an unqualified way that honey may cause any one's death, is to utter an absurdity.

As against the few persons who cannot eat honey, we have a large class whose general health is greatly promoted by a regular diet of honey; and add to this its valuable service in a great many forms of disease, it will be seen how true it is the good things of this life are often decried for no other reason than in some exceptional case a person may be injured thereby.

New Philadelphia, O.

For the American Bee Journal.

N.W. Ill. and S. W. Wis. Convention.

The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association met at Mr. L. Highbarger's, near Adaline, Ogle County, Ill., on Aug. 19, 1884. The meeting was called to order by the President, E. Whittlesey. The Secretary read a report regarding the foul brood question. In order to secure concerted action, the Secretary had inserted a notice in the Bee Journal calling for the addresses of the secretaries of all the associations in the State; and it was hoped by this means to secure a concerted effort to influence legislation to prevent the propagation of foul brood. The notice, however, has not been responded to, and hence no correspondence has been obtained with other associations. The Secretary was appointed to present the subject before the Northwestern Association, which meets in Chicago on Oct. 15 and 16, 1884.

Six new members were admitted to the Association. The convention then adjourned for dinner, which well deserves the name of feast. One feature deserves special mention. In the centre of the table stood a pyramid of honey about 2 feet in height, and built of one-pound sections. It was beautifully decorated with flowers, while from its apex waved the "Stars and Stripes." The time until 2 p. m. was spent in examining Mr. Highbarger's well-kept apiary. During the inspection all were shown several queens which had been lately received from Kentucky. Also an Albino queen which attracted much attention.

The convention then discussed many questions relating to bee-keeping, among which the following are the most important: "What is the best method to prevent spring dwindling?" "Is it best to set colonies close together?" "What is the best method to prevent robbing in the spring?" "What is the best method to prevent increase?" "What is the reason for the appearance of black bees in a colony of Italians?" "What is the best method of wintering bees?" "What is the best material to pack bees in for wintering?" "Should the hives be shaded?" "Toward what point of the compass should the hives face?"

A vote of thanks was tendered Mr. Highbarger and family for the generous entertainment extended during the day. The convention then adjourned to meet in Freeport, Ill., on the third Tuesday in January, 1885.

J. STEWART, *Sec.*
E. WHITTLESEY, *Pres.*

For the American Bee Journal.

Sending Queens by Mail.

ARTHUR TODD.

I have read Mr. Doolittle's article under the above heading, on page 533, with considerable interest, and it recalls to my mind some serious losses which I suffered by loss of queens in the mails when breeding the African queens in Algeria, and shipping them to buyers in France. The temperature there was often above 90°, when I would mail a queen, and I argued thus: "Shut up in a leather mail-bag in such a heat, and then dumped into the mail-closet of a steamer for 36 hours, and then another journey of perhaps 48 hours by rail, what chance is there for ventilation?"

It struck me that if I could secure around the queen-cage as large an open space as possible, as a reservoir of pure air, I might succeed better. On inquiry, I found that the French "sample post" only allows a package of some 6x6 inches square, for such things as queens, and of very small weight. I, therefore, had space enough, but had to bring weight down to a fine point. I constructed a light wooden boxe 6x6 inches square, with air-holes all around it, and fastened in one corner of it my provisioned block queen-cage and its prisoners, using a candy the same as Mr. Good's.

I anxiously waited the result of my first shipment to a lady in the North of France, to whom I had shipped two beautiful queens both dying en-route. I have that lady's letter somewhere, thanking me for my trouble, and expressing her delight at possessing a German, African queen, adding that it was the plentiful supply of fresh air around her cage which saved the queen's life.

After that I lost no more queens. The advantages of my system of a "cage within a cage" are obvious. The group around the queen is kept compact, and natural warmth is not lost by fruitless rushing around a large cage, while the actual supply of air is practically inexhaustible. The extra postage was a trifle, as also the extra cost of the outside package, compared to the immunity from loss of my succeeding shipments.

Philadelphia, Pa.

Prairie Farmer.

Ants, Moths, Keeping Honey, etc.

MRS. L. HARRISON.

Bees have not gathered more than enough for their living during the past week. The nights were too cool for the secretion of nectar. Last night was warmer, and, to-day, the fragrance from buckwheat fields is wafted in through the open window as I write. As fast as the honey is sealed, it is removed from the hive, and all openings in the boxes pasted over with paper, so that the moth cannot get within to deposit its eggs. Extracted honey is kept nicely in jars with cloth tied securely over the tops, so that if it is not ripened sufficiently, the air will evaporate it. These jars can be piled one upon another, by putting pieces of wood between them. A proper place in which to store honey is a subject of much interest. Many persons complain that their honey sweats and the cells burst, causing it to run, and making a sticky, unsalable mess. If honey is kept where it freezes during winter, the capping, in the spring, will be found full of minute cracks, and as soon as the weather is warm, honey will ooze from the cells. Some recommend keeping it in a dry, cool place, but my experience compels me to differ from them. A hot room well ventilated cures the honey, and it will keep perfectly for an indefinite period. A large honey-producer has the south side of his honey-room all glass, so that the sun will heat it, and burns sulphur in it occasionally to destroy any moths lurking within.

Little red ants are sometimes a pest in the apiary and in the honey-houses. Tansy strewn around hives and upon the floors and shelves of the houses, is recommended by many bee-keepers as an antidote against them. A wire cage might be made, and sponges put within, wet in poisened, sweetened water, which would destroy them; borax, scattered where they frequent, will kill them. I am partial to young chickens in the apiary, as they destroy the larvæ of many injurious insects.

A little new honey is coming into this market, and I saw one-pound sections of white clover honey retailing at 15c. Sugar is so cheap that it will, no doubt, affect the price of other sweets. Sunflowers are a favorite in my apiary, and to-day I measured the circumference of a Russian head and found it 40½ inches. It was the only flower on the stalk, and the birds commenced eating the seed as soon as it passed the milk. They pick off the end of the seed-shell and pull out the kernel, and if we secure any for our fowls, we must watch the heads and cut them as soon as the birds begin upon them. A lady, who called recently, said; "I have a colony of bees which I think is queenless. I examined them and found only sealed brood." In answer to my queries, I ascertained that there were only about a double-handful of bees and not a drop of honey. That little colony, no doubt, has a queen, but she is a wise mother and does not use her procreative powers to produce offspring to starve. To-day there are, perhaps, many small colonies of bees without a drop of honey, that must perish, sooner or later, if not fed.

Peoria, Ill., Aug. 15, 1884.

For the American Bee Journal.

The Origin of Honey-Dew.

T. J. BURRILL.

It is curious to notice the theories and speculations concerning the origin of what is called honey-dew. This sweet substance is certainly elaborated in the bodies of insects, and all that is required to demonstrate the fact, is a little close observation aided, it may be, by a hand-magnifier. To one accustomed to careful looking, honey-dew is as much a sign of the presence of plant-lice or their allies, as certain tracks in the corn-field indicate to the farmer the existence of depredating cattle, or as peculiar imprints in fresh snow reveal to the hunter the near occurrence of the sought-for game. That some plant-lice and some bark-lice do exude such sweet fluid from peculiar organs usually situated near the hinder extremity of the body, is as certain as that bees gather nectar or pollen from flowers, and the certainty comes from the same source, to-wit; actual observation.

It may be stated with equal positiveness, though the information is less directly based upon simple eyesight, that the sweet substance called honey-dew is never exuded from the glossy surfaces of leaves on which it is so commonly seen. Nectar is produced by many plants, not only in the flowers, but from other parts of the growing or living substance, but it is always, except, perhaps, from wounds, elaborated by special glands from which it is thence poured out. These glands are never found opening through the glossy coating of the leaves. Our native plants never become gorged with fluid in summer time so as to cause pressure from within, to force out the juices, as has been so often theoretically assumed. Even if this were true, we should look for the exudation from the pores of the under side of the leaf rather than the upper, because there is much less to prevent such escape through the thinner epidermis, or the far more numerous openings of the under surface.

It is also curious that so many conclude that the deposition of honey-dew only takes place at night, a statement as much at variance with truth as the opinion that stars exist in the heavens only after the sun goes down, and much easier proved to be false. The fact is, in most cases the exudation is commonly greatest in day time, but more rapidly dries. The only reason in the world that the substance is seen on the upper sides of leaves rather than the lower, is that it falls from above. A piece of glass or a painted board put in the situation of the smeared leaves, will soon be found similarly spotted with the adhesive, colorless material. With us just now there is upon the leaves of our soft maple trees multitudes of a peculiar louse, and from the latter there is enough sweetish fluid exuded to conspicuously wet the sidewalks under the trees.

If we inquire why the little insects produce the sweet substance, an interesting study is opened. It must be understood that the material is not excrement. The elaboration is the work of two special glands which open through variously shaped external appendages, usually directed backward, and situated one on each side, near the hinder extremity of the abdomen. The insects are provided with sharply-pointed sucking organs projecting from the mouth, by the aid of which they all live upon the juices of plants. A portion of this plant-sap is, after absorption from the alimentary canal, converted into honey-dew and deposited at the will of the insect, often collecting at the extremity of the opening in little spherical drops which fall one after another as it slowly issues. One would at first say that it must thus be an expense to the internal economy of the little creatures without compensating benefit. It is simply elaborated and poured out. After more careful study, however, it will be ascertained that there is at least one useful purpose subserved. It secures the good-will and attention of friends who act as guards against enemies.

It is well-known that ants are extremely fond of sweet substances, and honey-dew forms no exception in their bill of fare. For it they ascend trees in great numbers, and caress in a most remarkable manner the honey-dew producers. In response to their petting, it is easy to observe the droplets exude which the ants sip with apparently great satisfaction.

Plant-lice have many insect enemies, but so long as the ants are in attendance, they are safe. The active, well-mailed, sharp-jawed creatures make excellent police. They are ever alert. They never accept a fee from the enemy; they never bargain for a share in the plunder. Honey-dew seems specially provided for ants.

Now, as to the question of quality as honey when collected by bees, there may still be differences of opinion among men, even after the source and method of production is understood. No doubt, however, most people will prefer to have that gathered from flowers without admixture with the plant-louse product. It may be, to be sure, that different lice elaborate different grades of honey-dew, but the best may not be considered good enough for home use, whatever the conscience dictates in regard to the market.

Illinois Industrial University.

* * *

For the American Bee Journal.

Honey Show-Case.

A. H. DUTTON.

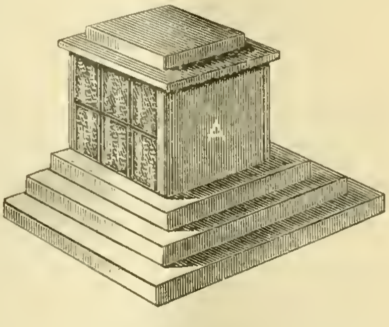
From all quarters the honey crop in this section is reported as good. My brother-in-law, G. A. Deadman, who is one of the largest honey-producers in the county of Huron, began the season with 53 colonies, and up to date has increased them to 130, and has taken surplus honey, chiefly in the extracted form, to the amount of about 5,000 pounds. The crop is principally from the white clover and raspberry, and it is of superior quality. The basswood, of which we have a considerable quantity, is proving almost a failure this season, on account of the scarcity of bloom and other causes, presumably, as the remote cause, on account of the very heavy bloom of last year, which was one of the most remarkable basswood honey seasons we have had for years past.

The bees kept by Mr. Deadman and myself are the Heddon hybrids, Germans and Italians, and have given us returns and consequent satisfaction in the consecutive order in which they are mentioned. We also have several colonies of Syrians, but have not sufficiently tested them to be able to report definitely. The distinct and well-established strains or breeds of poultry, canary birds, dogs, cats, etc., have been produced by the crossing of two varieties, and then perseveringly breeding to a pattern; and why will the rule not hold good in the case of bees also? Are they a solitary exception to laws and conditions which dominate over all the rest of animal life merely possessed of greater magnitude of body, and which under human intelligence, within certain limits, "is as clay in the hands of the potter?"

We have found that it pays every time, when running for extracted honey, to wait until the frame is about one-half sealed before extracting. The supply of wax and splendid quality of honey thus obtained more than repays for any slight increase which may be obtained by taking the honey unripened and then evaporating. Honey, properly ripened before extracting, possesses a beautiful, crystalline, refractive appearance, and is so thick as to pile high up when poured from one vessel into another. Smooth and oily to the taste, and causing no irritation to the throat in swallowing, and having all the richness of flavor of the honey sealed in the combs of the sections, and if it candies at all, after being properly bottled, it will be the last to do so.

The solar wax extractor, as made by Mr. O. O. Poppleton, is a success, and an article which should be found in every well-appointed apiary. Aside from its furnishing the wax of the cappings, melted down and partially clarified by the wire strainer through which it drops, thus leaving it in the very best condition for subsequent clarifying, it saves honey alone sufficient to pay for itself twice over in the course of a fair, average season, when working principally for extracted, with, say 50 colonies, spring count.

We suppose that hundreds of private bee-keepers all over the land, with their 10, 20 or 50 colonies, and blessed with abundant surplus stores therefrom, are desirous of knowing the ways and means of disposing of the same to the greatest advantage; and to such would we say, "Work up a local market." For two reasons it pays the best: 1. Much better prices are obtained. 2. Shipping expenses are saved. To make for yourself a remunerative and permanent market, proceed as follows: Obtain from the Editor of the BEE JOURNAL 1,000 or 1,500 of the Leaflets entitled, "Why Eat Honey," which, when purchased in even less quantity, will be furnished with your address printed on each; mail one of these with an accompanying note stating who has your honey for sale, to the lady of every household in the village or town where you live, and throughout the surrounding country as well. Before doing this, however, make an arrangement with as many grocery and confectionery shop-keepers as possible to handle your honey; and if you can persuade them to do so, to handle it exclusively. Engage on your part to keep them constantly supplied with all kinds in good shape, of the best quality, and in every grade absolute purity guaranteed. Promise to leave the first consignments on commission, or until a fair trade has become established, and as a further inducement, supply each one who is likely to have a good scale for it, with a combined show-case and stand of the following or some similar design:



Let it be borne in mind (I am speaking from constant experience) that in 5 cases out of 6, customers for honey are captivated by its APPEARANCE in the store of the retailer. Then let that appearance be as captivating as ingenuity can possibly make it. Let the word "HONEY" on the labels, be in large, black, block type, but not so large as to extend entirely around the bottle, but to be easily readable when facing the customer. Large, highly-colored, flashy labels which cover up nearly half of the bottle or tin, are to be avoided. Any saw or planing mill will furnish the pieces for the above case and stand, in the flat, and if the producer is possessed of ordinary mechanical ability, he can put them together himself, and not reckoning his own time, the total cost for wood, glass, nails, staining and varnish, all told, should not exceed $1.25 per stand.

The use of this or a similar show-case aids in the sale of the honey immensely, and when properly dressed with comb and extracted honey, it forms one of the most conspicuous objects of the store wherein it is placed, and rarely fails to attract the immediate attention of every customer who has not seen it before.

The choicest sections should be placed next the glass inside the case, and a row of pint Gem or Mason jars filled with the clearest extracted honey on the highest shelf outside; on the two shelves below, place quart-jars, and on the counter surrounding the whole stand, with the exception of the back, place another row of quarts; there will thus be four rows of bottles ascending one above the other, and the case containing the comb honey springing from the midst of them, which is surmounted by a miniature pyramid of pint-bottles and cap-sheafed by a 5-pound bottle in the centre. It would be advisable to keep a tumbler of honey open behind the stand, and then if any *bonifide* inquirer should desire to know the quality of the honey before purchasing, hand him out a spoonful on a small crystal kept for the purpose.

Keep nothing but thoroughly ripened honey on hand in the extracted form, and seek to obtain your honey in sections as thoroughly capped as possible. If these methods are perseveringly carried out, you will soon find yourself the happy possessor of a paying business, and one wherein you can bid defiance to any opposition.

Brussels, Ont.

For the American Bee Journal.

Hiving Swarms of Bees.

I. H. SHIMER.

Having read with interest the several articles in the BEE JOURNAL on hiving swarms, I venture to give my method of procedure, which is as follows: I make a two-frame nuclei hive of the right size to hold the brood frames, and in place of having the sides and bottom tight, I nail strips ½x½ inches wide, and of the length I desire, and ½ inch apart. The top is solid, being made of ½-inch lumber and fastened with a hook on each end. I now make an iron bail and attach it one-fourth of the way down on the ends. This bail is long enough to pass under the bottom, and having a socket in the centre to receive a pole or handle, I then fit two empty brood-combs into the swarmer having slots to hold them, so they cannot swing and mash bees.

When a colony sends out a swarm, I place a hive where I want them to stay, and when the swarm is clustered, fasten down the top, put my pole into place, take the swarmer and smoker in hand, and go to the cluster and place the swarmer directly over or against it, and give them a few whiffs of smoke to start them, and they cluster on the combs at once. I then lower them so I can reach the bail, remove the pole, carry the swarmer and bees to the hive, put it down in front of the hive, unhook and raise the cover, lift the frames out and place them in the hive, when I usually get two-thirds of the bees into the hive, and hardly ever fail to get the queen in also. The rest of the bees will soon follow, and there is no noise or commotion about it.

If I have no empty combs, I take out two frames from some hive, shake the bees from them, and place them in the swarmer. As I always put a frame or two of fresh brood in a new colony to help them, I have no absconding. If I wish to economize on the expense of the swarmer, I omit the bail, and nail a 3-inch strip of lumber on the bottom 1 inch thick; I then bore a 1-inch hole through the cover, and make a shoulder on the pole so that I can run it up between the combs, and use the swarmer as before. I try to guard against swarms uniting, but if it was not for saving valuable queens, that would give me no trouble as the stronger the colonies are the better. I have no use for a pair of pruning shears, or a saw or knife; I can get them as well from a trunk or fork of a tree as in any other place, if I can get the swarmer against or directly over them, I have no occasion to deface a tree.

Hillsboro, Ill.

For the American Bee Journal.

New Zealand Comb Foundation.

One who signs himself as "Another New Zealand Bee-Keeper," writes as follows to the BEE JOURNAL:

In the BEE JOURNAL of March 5, page 155, there is a communication in "What and How" columns which escaped my notice until a few days ago, from a "Bee-Keeper in New Zealand," in which there are certain quiries put as to the purity of the wax in some samples of comb foundation sent by that writer, for the purpose of testing. Now, as the principal part of the comb foundation used in New Zealand is made by one firm, and that firm was accused by one party, of adulterating the wax, without any grounds for the accusation whatever, it would appear that there is some intimate connection between the accuser and the quirist. I would, therefore, ask you, in the interest of "fair play," to publish the following clipped from the *New Zealand and Australian Bee Journal* of Feb. 1, 1884:

"Some few weeks back we received a letter stating that a report was being circulated that we were adulterating the wax, from which we made our comb foundation with paraffine or some composition. This, of course, was tantamount to accusing us of roguery in selling our customers an article made from other material than what we represented it to be. We at once wrote a letter to the gentleman, who, we were informed, had made statements to the above effect, telling him of what we had heard, and asking him if it was correct; after waiting several weeks for a reply, we received the following for publication:

To the Editor A. and N. Z. Bee Journal:—Having heard statements made which caused me to think and believe that the material used in the making of your comb foundation was not pure beeswax, but some kind of composition, I forwarded a sample of it to Mr. Pond, analyst for Auckland Province, for analysis, and I herewith hand you a copy of his report, for publication in the *Journal*. The sample was taken from a box obtained from Mr. Hayr, in the ordinary way of trade, and that gentleman had no idea that any of the purchase was intended for analysis. I have to congratulate you on the result of the test, which I may state was also made without any knowledge on your part, and I trust that the publication of Mr. Pond's report will have the effect of causing all the bee-keepers in Australia and New Zealand to do as I have done, and recommended, viz: using the foundation in full-sized sheets, and not in starters only, the latter practice being, in my opinion, a "penny wise and pound foolish" economy.—JAMES DALZIEL.

Following is the report of analysis: —"DR. DALZIEL, Pukekohe.—I have made an extended examination of the sample of comb foundation submitted by you on the 6th inst., with the result that I find it to be a fairly good sample of beeswax, containing no foreign substance. Melting point, 145° Fah.; specific gravity, 96.117; ash, a trace. Substances not wax: Fragments of bees' wings and legs, pollen grains, and water. I have the honor to be, sir, your obedient servant. —J. A. POND, *Colonial Analyst*. Auckland, Dec. 12, 1883.

"Although Dr. Dalziel has done what, of course, he had a right to do to satisfy himself whether we were practicing an imposition or not, *i. e.*, in getting an analytical test of the comb; still, we think he should have done this in the first instance, as soon as he suspected that it was adulterated, or, at any rate, before he made mention of it to others, and not have left it till written to on the subject.

"With regard to our comb foundation, we may state that in making it, we could not possibly be more particular in keeping it free from impurities than we are. The beeswax of commerce is usually in a very dirty state, especially on the outside of the pieces; these are all thoroughly scraped, and every ounce is then put through a double-refining process, in special boiling water-baths, before being made into comb foundation. We sometimes get, amongst the large quantities of wax that we purchase, pieces that have been adulterated; but having now handled some tons of wax. we can easily detect them ; these are laid aside, to be sold eventually to a candle factory. A second thought should convince any person that whatever is sent out from the Matamata Apiary is, as far as we can possibly know, exactly what it is represented to be, for we should have everything to lose and nothing to gain in deceiving our customers ; and we know that the proprietor would not lend himself to any kind of deception. Since we have been connected with the bee-industry, we have done our utmost to promote it in every possible way, sparing neither trouble nor expense to further the interests of bee-keepers, and we believe that those who have known us longest will give us some credit for honesty of purpose in this respect. However, should there be any kind of misunderstanding amongst any of our customers with regard to goods obtained from us, when notified we shall only be too glad to explain or rectify any mistake that may have been made.

[We have given the above out of a sense of justice to our many Australian subscribers, but it should be borne in mind that the BEE JOURNAL decided that the wax sent here for examination was, on page 155, pronounced a genuine article.—ED]

SELECTIONS FROM OUR LETTER BOX

My Report for 1884.

I began the season with 88 colonies ; increased them to 117, and took 51 forty-gallon barrels of extracted honey. I have not yet weighed it all, but it will run considerably over 20,000 pounds. All of my top sections are full, and I should have taken more honey, but I run out of barrels and had nothing but the frames to hold it. I shall take more after awhile.

W. S. HART.

New Smyrna, Fla., Aug. 18, 1884.

Introducing Queens.

A short time ago I received a queen from Massachusetts, when I removed the old queen and put the cage and new queen in one corner of a frame and left her 24 hours. I then opened the hive and found small queen-cells which I removed and left her another 24 hours, when I looked and again they had queen-cells which I removed and let the queen out of the cage, when she flew out of sight. In about 10 minutes she returned, and several times tried to light on the combs, but the bees flew at her and drove her away, so I caught her and put her into the cage, and then again into the hive. It took 5 days to introduce her, but I succeeded, and she is now laying fast. I tried introducing virgin queens by letting them run in at the entrance when the hive contained capped queen-cells, and lost one-half of the queens. I notice in the BEE JOURNAL something concerning the tree-trunk method of wintering bees, and I will say that there is not one colony in fifty that will live 5 years in any tree in Minnesota. I have known them to live for 3 winters and then die. I winter my bees in the cellar with a temperature of 35° and 45° above zero, and keep them in as long as possible. I shall try wintering a few colonies on the summer stands during the coming winter.

FAYETTE LEE.

Cokato, Minn.

Thoroughwort.

Please correct a mistake in my letter on page 523. You made it read, "The Italian bees are the best bees to gather honey, early and late." It should read, "The Holy Italian bees are the best bees to gather honey, early and late." Please tell me the name of the enclosed plant, and its merits as a honey-plant, to settle a dispute. We have dry and hot weather yet.

R. M. OSBORN.

Kane, Ill., Aug. 22, 1884.

[Nonsense ! There are no such things as *holy* or *unholy* bees. "Call things by their proper names." We suppose you mean hybrids of the Syrio-Italian variety. To call such "Holy Italians" is *unholy* bosh.

The plant is thoroughwort (*eupatorium*). It is an excellent honey-producer.—ED.]

Bee-Keeping in Scotland.

DEAR EDITOR :—This has been a splendid season for the bees. The heat at times is most excessive. We have also had long intervals of drought during the season. The most of the bees here have now been removed to the Heather Hills for the second honey harvest. With the success of this year, I think it will do much for the future encouragement of bee-keeping. In fact, apiculture has made rapid progress all through Scotland since you visited us 5 years ago.

JOHN D. HUTCHISSON.

Glasgow, Scotland, Aug. 11, 1884.

Best Honey Season for 6 Years.

I have sent you a vial containing some of my honey mixed with "honey-dew." This should be white honey gathered during early summer, but it looks more like fall honey, and as for quality, I will let you pass your opinion. We have had the best honey season that we have had in the past six years. Although the spring was late, since the honey-flow began there has been no cessation except during a few rainy days when bees could not put in full time. At present buckwheat is at its best, and the weather hot and sultry, just right for a good yield of honey. The second crop of red clover, too, is in full bloom, and the bees work on it with a will. I have had quite a number of swarms lately, but have returned all of them, which has kept me pretty busy to add frames and boxes and extract from those not worked for comb honey. I got rid of fertile workers in a colony by taking frames of brood with queen-cells from colonies that had swarmed, and they reared a queen, but not until after several trials, apparently when the young bees which were introduced became numerous enough to manage the household affairs. I market my extracted honey in pint and quart fruit-jars, and to hold them, make boxes with thin partitions, each holding a dozen jars, thus keeping the jars clean and separated in handling. I sell the jars along in nearly every instance, as they are used in almost every family. The boxes are made with handles at each end.

W. H. STOUT.

Pine Grove, Pa., Aug. 20, 1884.

[The contents of the bottle might pass for a very inferior article of molasses, but never for good honey. It was ruined by that honey-dew.—ED.]

An Average Season.

The honey season with us is over for this year, and it has been about an average one. However, I noticed something this season that I never before saw in this part of the country, and that was "honey-dew." I noticed it only on the maples, and it continued for about one week during the mornings. It occurred about the time the leaves had their full size, while they were yet young and tender. It formed on the top side of the leaves in small drops not as large as a pin-head, and soon died away before the morning sun, but the bees would have a lively time while it lasted ; and after all I am not certain that it amounted to much. White clover and the locust trees are our main dependence here. The locust bloom was good this season. There is nothing more beautiful to me than to see a locust in full bloom, and there is nothing else that I know of which so excites bees to active work. But few bees are kept in this neighborhood.

OSMAN MCCARTY.

Zollarsville, Pa., Aug. 22, 1884.

Motherwort.

I send you parts of a plant to name. The bees worked lively on it all through a good basswood yield.

JOHN C. GILLILAND.

Bloomfield, Ind.

[It is motherwort, an excellent honey plant.—ED.]

The Season a Poor One.

I wintered 29 colonies, but the season here has been a poor one. I have had no swarms yet, and took the first extracted honey this week. The bees are now gathering honey from buckwheat and goldenrod, and I expect a good fall crop. The bloom has been abundant, but too much wet weather has prevented the bees from utilizing it.

JACOB EMMONS.

St. George, Kans., Aug. 25, 1884.

Mignonette Described.

About 4 years ago I bought an ounce of mignonette (*Reseda grandiflora*) from a supply dealer, which has been supplying my bees with some pasturage up to the present season. It grows to a very great size, 7 or 8 feet high, with long limbs, and all covered with yellow flowers, which are never without bees on them. The farmers around me, and others who should know better, declare that it is nothing but wild mustard, and that it will corrupt their fields. They have actually requested me to have it removed. Will you be kind enough to describe the plant, distinguishing it from the troublesome weed called wild mustard, so that my neighbors may sleep quietly without fear of having their fields contaminated?

A SUBSCRIBER.

[The most positive way to distinguish between mignonette and any and all kinds of mustard is the number of stamens in each flower. In all of the latter these are uniformly six—never more nor less; while in every flower of mignonette the number is from 10 to 40. The stamens are the thread-like organs bearing at the top and enlarged part called the anther, in which the pollen is produced.—T. J. BURRILL.]

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Was it Foul Brood?

On last Saturday evening, a neighbor of mine found and cut a bee-tree about three-quarters of a mile from my apiary. On Sunday evening he told me that he had failed to get the bees into a hive, and incidentally remarked that the comb had a disagreeable smell. That at once aroused my suspicion that it was foul brood. On Monday morning I visited the place for the purpose of making a personal inspection. I found the tree to be a post-oak with a small, dry cavity, containing only a few bees and some combs which had the appearance of being new, or made this season, and containing about one pound of honey, some pollen, and brood. The capping of the brood seemed to be torn, but I saw no small holes such as are described by the writers on this subject. The combs emitted a very offensive odor, and were black, except the edges which were bright. The brood was all dead when I saw it. I had the tree, the bees and the comb cremated. I fear that it is a genuine case of foul brood. Am I correct? Is it usual for foul brood to exist with wild bees? If it was foul brood and having been exposed for a whole day, (my apiary being only three-fourths of a mile away) are my bees in danger? If they are, what can I do under the circumstances? I am alarmed for the safety of my colonies. I am a beginner in the bee-business, having commenced three years ago with 4 colonies, and this year I have 63. I use the Simplicity-Langstroth hives with Quinby bottoms. This has not been a good honey season, yet I will be able to sell 3,000 or 4,000 pounds of honey. Bees have swarmed but very little this spring. I got only about 25 swarms from 34 colonies, spring count. I lost only one colony last winter, having wintered them on the summer stands.

GEORGE E. BURNETT.

Harrisburg, Ill., Aug. 19, 1884.

ANSWER.—If I were on the ground, I think I could tell whether or not it was foul brood, though I have never seen a case of the disease. He who cut the tree may have smelled one bad odor, or what he called bad, and you another caused by the dying of the brood since the tree was cut. Another question, Is there any foul brood within 20 or 30 miles of you? Supposing it to be foul brood, whether or not your bees would catch the disease depends upon whether they visited the spot or not, and that depends entirely upon the amount of secretion and nectar in the flowers about you. If it was a time of honey-dearth, they would most certainly visit the spot to greater or less extent, and would more than likely contract the disease, provided the tree-colony had it. Your question, like many others, is quite deficient in detail, but I guess that it is not foul brood.

Moving Bees.

What is the best time and method of moving bees on a wagon 16 miles, between August and November?

Le Claire, Iowa. A. M. EARLEY.

ANSWER.—I wish that you had mentioned the number of colonies which you wish to move. If only 5 or 6, I should put them on a spring wagon with straw in the bottom, or a larger springless wagon filled with straw will do first-rate. Put in just twice as much straw as you think you need. If you are going to move 15 to 100 colonies, put a flat rack upon a wagon and pile as broad and flat a load of straw on the rack as possible. When it is 2 feet above the highest point of the rack, you have enough. Upon this load you can put about 30 colonies, and let the combs run crosswise of the wagon. I would prefer to move them on a cool, cloudy day, and after the queens had ceased laying for 10 days at least, or as late in the season as you feel warranted will give the bees a thorough flight after your arrival—a flight of 2 or 3 days duration. Ventilate the hives thoroughly, fasten the frames securely, drive very carefully, avoiding all jars possible.

Ripening Honey.

Will you kindly inform me through the columns of the BEE JOURNAL which is the best way of ripening honey, say in quantities of from 35 to 40 barrels? If a tank is used, of what material and shape should it be made? Bees have done well in this neighborhood, although the country was entirely submerged for several months. This year I have taken on an average of 100 pounds of extracted honey per colony. M. T. HEWES.

New Roads, La., Aug. 17, 1884.

ANSWER.—The subject of artificially ripening extracted honey, is one I have thought upon considerably, but having had no practical experience in the matter, I feel incompetent to give you the information desired. Our California brethren have had some experience in this matter, and if I remember correctly, have in the back numbers of the BEE JOURNAL given us some illustrations and descriptions of the methods which they use. I believe large apiarists will find it advantageous to ripen their honey artificially.

Killing Bees.

I send you a sample of bees which I have taken from a colony of Italians. There are quite a number of them, and the other bees are putting them out of the hive and killing them. For several days past, at almost any time during the day, I could see from one to a half dozen being put out. What kind of bees are they? and why are they treated thus?

H. J. NORTHRUP.

Lansingburgh, N. Y., Aug. 12, 1884.

ANSWER.—After examining the sample bees, I should think that they were individuals of the colony which is putting them out and killing them, and which have devoted the most of their time to robbing, and that, too, in some place where they have become daubed. I think you have reason to rejoice that these worse than worthless bees are being destroyed.

Utilizing the Cappings of Honey.

Why could not the cappings obtained while extracting be utilized by the bees? It seems to me that if it was made very fine, that they might use it just as they use the natural wax-scales. Has any one ever tried it? A. C. SANFORD.

Ono, Wis.

ANSWER.—We have had several reports of experiments made in trying to get the bees to utilize cappings in the very way that you mention; but so far experiment has proved it a failure, and that it is better to melt the cappings into wax and make the wax into foundation.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

☞ In reply to many correspondents let us say that we take any kind of postage stamps as money, but coins should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts.; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

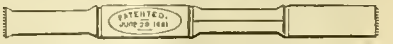
We will supply them by the dozen at 25 per cent. discount, post-paid.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

"BOSS" ONE-PIECE

SECTIONS.



We have again increased our capacity for making the "BOSS" ONE-PIECE SECTION, and are now ready to fill orders on short notice. We would advise our customers, and especially **SUPPLY DEALERS**, to

ORDER EARLY,

And not Wait until the Rush Comes.

We will not manufacture Hives and Shipping Crates this season, as we have fixed over all our machinery for making the One-Piece Sections.

J. FORNCROOK & CO.,

49BCtf Watertown, Wis., Dec. 1, 1883

65 *ENGRAVINGS*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11A26t

Young Men!—Read This.

THE VOLTAIC BELT CO., of Marshall, Mich., offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred, as thirty days trial is allowed. Write them at once for illustrated pamphlet free. 6D1y

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BEE-KEEPERS' GUIDE;

Or, MANUAL OF THE APIARY.

11,000 SOLD SINCE 1876.

12th Thousand Just Out!

11th Thousand Sold in Just Four Months!

2,000 Sold the past Year.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
State Agricultural College, LANSING, MICH.
18C7t 20D12t

1884. JOSEPH D. ENAS, 1884.

(Sunny Side Apiary,)

Pure Italian Queens, Bees, Colonies, Nuclei,

EXTRACTORS, COMB FOUNDATION, &c.

24D10t Address, Sunny Side Apiary NAPA, CAL.

QUEENS BY RETURN MAIL.

I am now up with my orders, and can send choice queens by return mail. Send me your orders, and help me "out of the fire."

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ITALIAN QUEENS.

(SECOND TO NONE)

BY RETURN MAIL.

Also, Syrian and Carniolan queens, mated with Italian drones. Untested queens of either race, $1.00; tested queens of either race, $2.00. Special rates on large orders. Circular free. Send postal for it. **G. H. KNICKERBOCKER,**
34Dtf PINE PLAINS, N. Y.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to
Ctf A. I. ROOT, Medina, O.

TESTED QUEENS, $2; untested, $1; 4-frame Nuclei, $3.50 and $4.50. Mississippi Wax Extractor, $3. OSCAR F. BLEDSOE, Grenada, Miss.
21C12t

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FOR HIVES, SECTIONS, &c.

I am now prepared to supply dealers and consumers with

Hives, Sections, Broad Frames, Shipping Crates, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
1Ctf 12Btf DUNDEE, Kane Co., ILL.

YOU NEED the **National Real Estate Index.** Full of TRADES, Bargains and Real Estate news. 50 cts. a year. Sample copy free. Address,
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Is now making a specialty of rearing fine Italian queens. All queens bred from the purest and best of mothers, and the cells built in full colonies. Single queen, $1; 6 for $5; 12 or more 75 cents each. Tested queens, $1.50 each. Make money orders payable at Flint, Mich. He has a large stock of Queens on hand, and can fill orders by **RETURN MAIL.** 35Dtf

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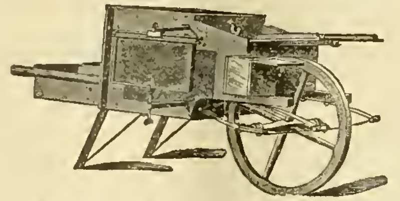

DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Price, complete, only............$18.00.

For sale by **ALFRED H. NEWMAN,**
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HIGH-GRADE QUEENS.—In closing the Queen trade for this year, I have some fine high-grade "business" Queens, which will be sold for **40 cents** each. Fine breeding Italian stock for sale. G. W. DEMAREE, Christiansburg, Ky.

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5Ctf **PAUL L. VIALLON,** Bayou Goula, La.

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Who sends us eight 2-cent stamps (16 cents) and the names and address of ten boys and girls who love to read, will receive YOUNG AMERICA, a large 50-cent monthly, full of beautiful pictures, brilliant stories, poems, puzzles, etc., one year, free. Don't miss this rare chance, as this is the best and cheapest youth's paper in America. Address YOUNG AMERICA, Lock Box 675, Canal Dover, Ohio. 35A2t

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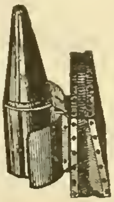
THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published SEMI-MONTHLY, at Seven Shillings per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**
LONDON, ENGLAND.

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

IF YOU WANT

—A—

VEHICLE,

SEND A POSTAL CARD TO THE

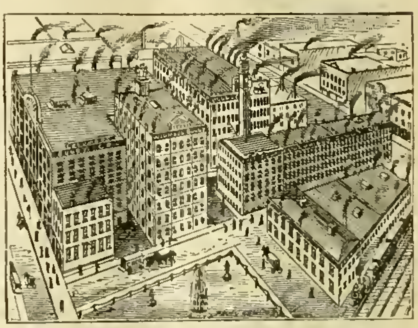
COLUMBUS BUGGY CO.

COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL.

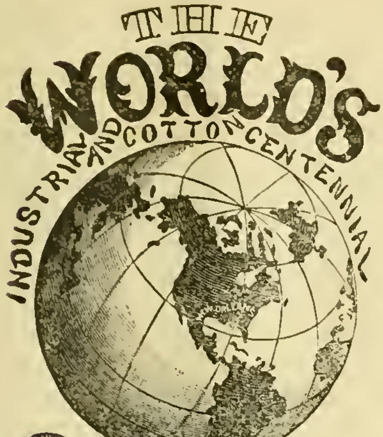
Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

TESTED QUEENS FOR $1.00.

ONE or more Tested Queens, $1.00 each. SIX unwarranted Queens for $4. Cyprian Queens crossed with Italians, at the above prices, and I claim that they are the best bees. I guarantee each Queen to be young and good.

J. F. HERSHEY, Mount Joy, Lancaster Co. Pa.
35A2t



EXPOSITION
New Orleans.

Opening December 1, 1884; Closing May 31, 1885

— UNDER THE AUSPICES OF THE —

United States Government.

$1,300,000,
Appropriated by the General Government.

$500,000,
Contributed by the Citizens of New Orleans

$200,000,
Appropriated by Mexico.

$100,000,
Appropriated by the State of Louisiana.

$100,000,
Appropriated by the City of New Orleans.

From $5000 to $25,000,
Appropriated by Innumerable States, Cities and Foreign Countries.

Every State and Territory in the Union represented, and nearly all the Leading Nations and Countries of the World.

The Biggest Exhibit, the Biggest Building and the Biggest Industrial Event in the World's History.

APPLICATIONS FOR EXHIBITS ALREADY RECEIVED COVER MORE SPACE AND A GREATER VARIETY OF SUBJECTS THAN THOSE OF ANY EXPOSITION EVER HELD.

The cheapest rates of travel ever known in the annals of transportation secured for the people everywhere.

For information, address
E. A. BURKE,
Director General, W. I. & C. C. E.,
NEW ORLEANS, LA.

Syrian-Albino Queens!

My new Strain **AHEAD** of all. They build beautiful, straight Combs, **without Separators**, and are **UNEXCELLED** as workers. Reared by Alley's method.

Select-Tested, to breed from $3.00
Untested $1.50

Address, **DR. G. L. TINKER,**
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GREAT SAINT LOUIS FAIR,

October 6th to 11th, 1884,

OPEN TO THE WORLD

Entries, Spaces, Stalls and Pens Free to all Exhibitors.

$50,000 CASH PREMIUMS!

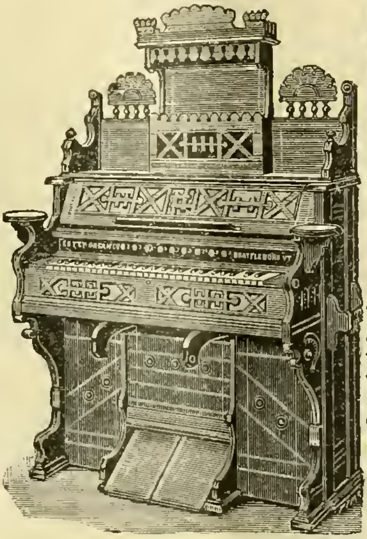
APIARIAN Exhibits the LARGEST in the World!

HALF-FARE RATES on all Roads during the Fair.

REGULAR LIVE-STOCK SALES DURING THE FAIR.

☞ For Illustrated Premium Lists, or information, address the Secretary. ☜

FESTUS J. WADE, Secretary. **CHARLES GREEN**, President.
35A4t



BUY AN ✱ ESTEY ORGAN!

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,
188 and 190 State St., CHICAGO.

Prices Reduced.

Owing to a decline in the price of Beeswax there will. hereafter, be a reduction of

5 cents per pound

on all orders for Comb Foundation,

I pay **28c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

ALFRED H. NEWMAN,
923 West Madison St., CHICAGO, ILL.

DOUGHERTY & McKEE,
Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

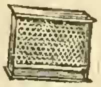
Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

For Bees, Queens,
Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to
FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

1868. 1884.

HEDDON'S COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house. good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Dèpot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from	$ 3 00
Untested	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition OF BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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J. W. ECKMAN,

DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.

7A1y RICHMOND, Fort Bend Co. TEXAS.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

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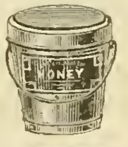
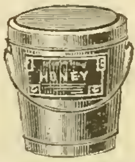
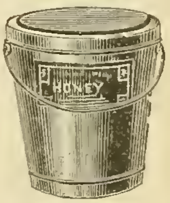


NEW HONEY PAILS



The accompanying illustrations show a nest of pails with the sides tapering, for marketing extracted honey. The covers are deep and the pails are made with special reference to filling them for the retail honey-trade. They are made in a superior manner and are quite attractive in appearance, when filled and nicely labeled.



	4 lb.	7 lb.	13 lb.
Per doz.	$1.25	$1.60	$2.00
Per 100	8.00	10.00	14.50

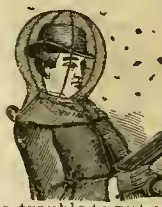
A. H. NEWMAN,
CHICAGO - - ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

A NEW BEE-VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

GOLDEN ITALIANS!

I now wish to say to my former customers, that I am now ready to fill orders for the following Queens.

Hybrid ..in May and June, each	$ .50
Italian—untested—not warranted, in May and June, each	1.00
Italian—warranted, May and June, each	1.50
Italian—tested Queen	2.50
Full colonies of Hybrids	7.00
Full colonies of Italians	10.00

20Atf **L. J. DIEHL, Butler, Ind.**

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM.
MAYSVILLE, KY.

37A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,

Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Notice This!

After Aug. 20, I will send by return mail a beautiful tested Syrian or Italian Queen, and one of my combined Drone and Queen Traps, or a copy of the Bee-Keepers' Handy Book, on receipt of $2.00; without book or trap, $1.50 each. Warranted Queens, $1.00 each. Select tested, $3.00. Safe arrival guaranteed, by mail.

HENRY ALLEY,
WENHAM, MASS.

33Atf

Bee Hives AND SECTIONS.

NEW SHOP AND NEW MACHINERY!!

The Largest Manufacturer of Bee Hives Sections, etc., in the World!

Our capacity now is a **CAR-LOAD** of goods daily. Hives manufactured from soft white pine, and sections from white basswood. Send for our new Illustrated Price List for 1884. It is **very important** you should have our new List before ordering, as prices are arranged differently from last season.

G. B. LEWIS,

1BCtf WATERTOWN, WIS.

LOCAL REPORTERS WANTED.

We want an agent and local reporter in every community to represent **City and Country,** and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**

24A18t

OLDEST BEE PAPER IN AMERICA

ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., September 10, 1884. VOL. XX.—No. 37.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, $2 a year; Monthly, $1.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

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To Europe—Weekly, 50 cents; Monthly, 12 cents.
To Australia—Weekly, $1; Monthly, 24 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

Entered at the Chicago P. O. as Second Class Matter.

ADVERTISING RATES.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 7 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, space, for each insertion

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

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THE AMERICAN BEE JOURNAL

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☞ The Illiuois State Fair for 1884 will be held at Chicago, upon the extensive and finely improved grounds of the Chicago Jockey Club, adjoining Garfield Park. The Fair will be held from September 8 to 13. A show of Fat Stock will be held in the Exposition Building, Chicago, Nov. 11-20, under the auspices of the Board.

☞ It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

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and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

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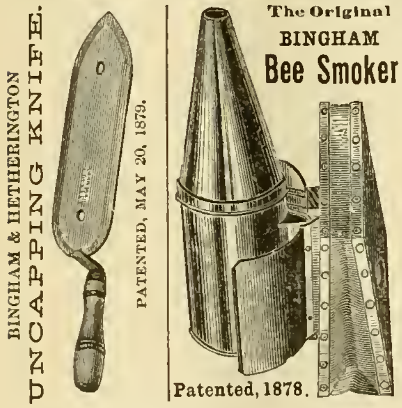

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The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

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Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.— By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

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Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, **$2** per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., SEPTEMBER 10, 1884. No. 37.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Bees in the Mails.

Mr. T. A. Hougas, of Henderson, Iowa, makes the following inquiry: "When did the 'act' permitting queen bees to be shipped by mail take effect?" There was no "Law" or Act of Congress in reference to "bees in the mails." At the National Convention of bee-keepers held in Chicago in 1879, Prof. Cook was appointed a committee to visit the Postmaster General at Washington, and endeavor to have his "Ruling" reversed which "prohibited the carrying of bees in the mails." The Editor of the BEE JOURNAL prepared a cage having double wire-cloth over the aperture, with ¼ of an inch of space between the two pieces of wire-cloth, affording sure protection to the Postal employes, which Prof. Cook took to Washington, with other sample cages for shipping queens. By the kind assistance of the Hon. Edwin Willits, of Michigan, the Professor obtained an interview with the Postmaster General on Jan. 14, 1880, and after hearing the case, and examining the cage, the order was reversed, taking effect immediately.

☞ The Northwestern Convention will be held at Owsley's Hall, corner of Robey and West Madison streets, Chicago, Ill., on Oct. 15 and 16, 1884. The official notice will be published next week.

☞ The Hiawatha, Kan., Fair will be held from Sept. 16 to 19, 1884. The Premiums in the Apiary Department amount to $45.00. Mr. J. W. Margrave is the Superintendent.

The National Convention.

Respecting the holding of the meeting of the National Society at New Orleans, Mrs. L. Harrison (who was probably re-elected Vice-President for Illinois, at the last meeting), writes thus:

"I second the motion to have the next National Convention at New Orleans. The Rochester friends could have it another year. We have had a poor crop of honey, and the railroad and boat fares will be low to New Orleans."

According to the Constitution, the next meeting *cannot* be changed. An adjourned meeting might be held there, early next season; or a special meeting could be called on the requisition of five Vice-Presidents, but as no one can tell who the Vice-Presidents are (through the bungling work at the last meeting), official action seems to be impossible. Let us hope that the next Convention will redeem itself. A "love feast" may be well enough in its way, but matters of "business" should be promptly attended to, officially recorded and duly published.

Making Honey-Vinegar.

Under this heading in the *American Agriculturist* Mr. W. Z. Hutchinson gives the following:

The "cappings" shaved off in the preparation of honey for extracting, are always allowed to drain. But even when thoroughly drained, considerable honey still adheres to them, and it is an excellent plan to have a keg or barrel of water in which to wash them, and to allow the water to ferment and become vinegar. Water which has been used to rinse out any utensil that has contained honey, can be thrown into the barrel. The scum that arises upon the surface of the sweetened water should be skimmed off.

☞ "The bees are swarming, and there's no end to them," said Jones, coming into the house. His little boy George came in and said there was an end to one of 'em, any how, and it was red-hot too.

Bee-Keeping in Russia.

Mr. Robert Eldridge, of Cincinnati, who has returned from Russia, where he has been largely engaged in the rearing of goats and camels, says in reply to the question of a reporter of the New York *Sun*, who asked What do you know of bee-culture in Russia?

In Little Russia and Lithuania the great linden forests render bee-keeping very profitable. The finest honey that I ever saw, is produced in Kovno. Kaluga produces annually about 1,760 poods of honey and 3,500 poods of wax. A pood contains about thirty-six pounds. The annual production in the Don Cossack country amounts to $50,000, in round numbers. In Volhynia and Bessarabia the combined yield of honey reaches a value of nearly $200,000 a year. The annual yield of the whole empire is not far from $4,000,000, or about 18,000 tons. To this must be added nearly 5,000 tons of wax, worth $2,000,000. This is about all consumed in Russia, the exports being very small.

Stings and Bites.

An old woodsman of Australia, who used to catch snakes for pastime, says that a raw onion bruised and applied as soon as possible to the wound is a certain cure for the bite of all the venomous serpents of that country, except the death adder, which he admits is so poisonous, and its poison is so quick in acting, that there is no known remedy for it. That the onion is a specific for the sting of poisonous insects of all kinds, has long been known to the writer of this paragraph, who, when a boy, invariably carried one on expeditions with companions against hornets' nests, etc. It was found that the application of onion juice would instantly allay the pain caused by the stinging of hornets, yellow-jackets, wasps, bees, etc., etc.—*Washington Star.*

TRIAL SUBSCRIBERS.—The Weekly BEE JOURNAL will be sent to any address in North America from now until the end of 1884 for 30 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

Local Convention Directory.

1884. *Time and place of Meeting.*

Sept. 13.—Union, Western Iowa, at Dexter, Iowa.
M. E. Darby, Sec.

Sept. 17.—Eastern Indiana, at Richmond, Ind.
M. G. Reynolds, Sec., Williamsburgh, Ind.

Sept. 17.—Eastern Indiana, at Richmond, Ind.
C. N. Blount, Sec.

Sept. 20.—Hancock County, O., at Findlay, O.
S. H. Bolton, Sec.

Sept. 24-26.—Western, at Independence, Mo.
C. M. Crandall, Sec.

Oct. 1, 2.—Cedar Valley, Iowa, at Waterloo, Iowa.
H. O. McElhany; Sec.

Oct. 2.—Whitesides, Ill., at Morrison, Ill.
A. B. Kreider. Sec.

Oct. 3.—N. Ind. and S. Mich. at Goshen, Ind.
F. L. Putt, M. D., Sec.

Oct. 4.—Progressive, at Bedford, O.
J. R. Reed, Sec.

Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec.

Oct. 8.—Central Illinois, at Bloomington, Ill.
W. B. Lawrence, Sec.

Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mic

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Introducing Queens.

Mr. D. Kepler in an Exchange gives his method of introducing queens thus:

I will detail in as few words as I can the methods that I have employed the last five years without a failure. Having procured the queen to introduce, I keep them in as comfortable a place as I can till evening. In the afternoon I hunt out the queens to be superseded, cage and return them to the central part of their respective brood-nests.

At or after sundown, I remove them, spray the bee and brood-combs liberally with diluted honey or thin sugar syrup. Daub the wings of the strange queen by turning her over in a spoonful of honey taken warm from one of the combs of the hive in which each respective queen is to be introduced, and introduce by allowing them to crawl among the workers on the brood-comb. Watch the workers a moment, and if there are any demonstrations of anger, spray bees and queen till they let her alone. Close the hive and all is done. If it is desired to introduce to divisions, it should be done as late in the day as convenient, and be sure that we know where the old queen is, ascertaining to a certainty in which division she is.

The philosophy of the above method seems to me to be in the bees never for a moment missing their queen. Aside from a little disturbance and a liberal feed, the bees seem unaware of anything unusual. Under this method of treatment, workers never molest or commence to hug a queen, and never ball one after dusk, and before sunup, and before they have forgotten their general feed, she is perfectly at home with them and is laying.

The National Convention.

☞ The date for holding the next meeting of the North American Bee-Keepers' Society, in the city of Rochester, N. Y., has been fixed for Oct. 28, 29 and 30, 1884. At the last meeting of the Northeastern Bee-Keepers' Association a committee was appointed to secure a Hall and make other necessary arrangements for this meeting. Knowing the men who compose this committee, we can assure all who are interested, that the matter is in good hands, and that everything will be arranged for one of the best meetings ever held by the Society. Rochester is one of the finest cities in the United States, and this should be an enjoyable meeting for all who are interested. We hope soon to announce a complete programme. C. C. Miller, *Sec.*
L. C. Root, *Vice-Pres.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Dexter, Iowa, on the second Saturday in September, at 9:30 a. m. This Association is doing a good work, and bee-men in Western and Central Iowa would do well to avail themselves of its benefits. M. E. Darby, *Sec.*

☞ The Cincinnati Exposition of this year, the twelfth in the series, opens September 3 and closes October 4—one month. Every facility of low rates on railroads and by boat are offered to the stranger to visit the city. Exhibitors, and any others seeking fuller information, may address the Secretary, who will furnish rules, regulations, premium lists, etc.
J. F. Walton, *Sec.*

☞ The bee-keepers' association of Central Illinois will hold their quarterly meeting at Bloomington, Ill., on Wednesday, Oct, 8, 1884, at 10 a. m.
W. B. Lawrence, *Sec.*

☞ The Whiteside Bee-Keepers' Association will meet at Morrison, Ill., at 1 p. m., on Oct. 2, 1884. All bee-keepers are cordially invited.
A. B. Kreider, *Sec.*

☞ The Bee-Keepers' Association of Eastern Indiana will meet in the rooms of the Y. M. C. A., at Richmond, Ind., on Sept. 17, 1884.
C. N. Blount, *Sec.*

☞ The Western Bee-Keepers' Association will hold its second annual meeting in Independence, Mo., Wednesday, Thursday and Friday, Sept. 24—26, 1884. The Association will endeavor to make this the most instructive and interesting meeting it has yet held, and will spare no pains within its means to make it in every sense valuable to all.
C. M. Crandall, *Sec.*

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Sept. 8, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no change to note in the price of honey, but demand is improving gradually. Extracted brings 6@9c on arrival, and choice white comb honey in sections, 15@16c.

BEESWAX—Is dull at 26@28c on arrival.

C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11½@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in, and selling at 16@18c. for best white 1 and 2-pound sections. New extacted, 8@9c. Honey in unglassed sections sells the most readily. Old comb honey all gone.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY—The demand for comb is very light. The retailers have bought a little during this month; but say that they do not have any call for it at present. Prices range from 12@16c per pound for the different sized frames and style of packages. There is a continued dullness in extracted. Some of the new crop is on sale.

BEESWAX—Is dull, and 25c for dark, with 30@32c for yellow, is the range of prices.

R. A. Burnett. 161 South Water St.

SAN FRANCISCO.

HONEY—Comb and extracted are offering freely. The market is weak for both kinds. Some extra choice extracted was placed at 5c., which is a full figure to realize in the wholesale market. For the choicest comb 10c. represents the extreme views of buyers, White to extra white comb, 11@12c.; dark to good, 7@9c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 25c.

Stearns & Smith. 423 Front Street.

KANSAS CITY.

HONEY.—This market now begins to show some activity with a good many inquiries and some sales. Prices, however, are not very strong under the very liberal receipts of the past week. I quote Fancy Comb, ½-lb. sections, at 18c.; 1-lb. sections, 17c.; 2-lbs., 16c. Dark honey, slow at 12 to 15c. Extracted in fair demand at 6½ to 7½c.

BEESWAX.—None in the market.

BEESWAX—Nominal, 30@35c per lb.

Jerome Twichell, 514 Walnut Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c; in a small way 17c is occasionally obtained, but 16c would be the more reliable quotation; 2-lbs., best white, 14@15c; second quality slow at 10@12c. Extracted slow at 8@9c.

BEESWAX—30c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

Geo. W. Meade & Co., 213 Market.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

CORRESPONDENCE

For the American Bee Journal.

Preventing After-Swarms, etc.

JAMES HEDDON.

To Mr. A. A. Decker's article on page 522, I will respond by saying that our experience here has been that we get more profit by having the second influx of bees with the prime swarm, than as though we had left them with the parent colony. As it is about 24 days before young bees begin to replace the rapidly decreasing numbers of a swarm, and the fact that at the time of swarming, the swarm not only leaves a portion of its bees in the old hive, but at least thrice as many unhatched bees, we think we get the better and more profitable division of the colony by taking what the old colony would send out in second and third swarms, and adding them to the prime swarm.

We have sometimes waited more than 7 days and never yet under any circumstances have we known the bees to quarrel. They all seem to recognize each other as members of one family. Here we are never troubled with swarms swarming, and have hardly any swarms of any kind during the basswood flow.

I very much object to Mr. Decker's plan of doing away with the queen-cells in a colony which has cast a swarm, by introducing a fertile queen to tear them down. I will tell why: 1. You are at the expense of buying or rearing a queen. 2. Under such conditions the bees are much less inclined to receive her. 3. The gain Mr. Decker speaks of is not there. All good, average queens fill all the combs with eggs that they should have, up to their full capacity just before the swarming period. This rest of 12 to 15 days that the combs get between the time of the exit of the old queen and fertilization of the new one, is needed to allow the young queen room to give you the full benefit of her fertility. Every now and then we have been, for 15 years past, presented with the immense advantages of filling this brooding-gap with a fertile queen, but yet the general practice of our bee-keepers does not adopt it. The principal is incorrect, as I discovered and said 10 years ago when it had ten times as many advocates as now.

SHALL WE BREED HYBRIDS?

The last statement in the first paragraph of Mr. Shearman's article, on page 519, is not true as far as my experience goes. When I first advocated that if Italians and Germans, if of the right strain, were bred together, they would produce hybrids not "cross," I do not remember of a seconding voice. Now Mr. Shearman and numerous others have had some experience bordering upon the fact, it seems, and I have no doubt but further on in the line of practical experiment (for he is one of our practical honey-producers), he will see that he was mistaken when, on page 519, he said that if these crosses were bred together, the result would be cross hybrids. My students, my visitors, and myself know to the contrary.

These hybrids, I think, after being bred together under the supervision and weeding of the bee-master, should be as much entitled to the name "strain," as the different strains of Italians and Germans in their purity, differentiated by undirected local influences. Mr. Shearman calls them "strains," and I know of no other term by which to better express what we mean; and just what we mean of these pure bees, we find exists with crosses judiciously conducted by the reason of the breeder. Now, who ever starts out on a new plan of breeding such strains, I think is correct in naming such bees a "new strain."

I approve of the advice given by Mr. S.: "Do not breed hydrids indiscriminately." I also add: Do not breed or allow to be bred in your apiary any strain or race of bees indiscriminately. If you cannot discriminate, it will pay you to buy queens of some one who can "Pay you" in surplus honey.

That crosses are the very best surplus-honey bees, I fully agree with Mr. S. and the numerous bee-keepers that he quotes, but that they swarm more than Italians in their purity, I find untrue in my practice. I have never had a race or strain of bees that failed to breed to the fullest extent of their capacity all through the fall bloom. During the first half of that bloom, including the dearth just preceding it, is the time when our bees breed more than at any time of the year. I am fully persuaded that Mr. S. will find that the extra safe wintering of the neighbor farmers' bees was a matter of "present condition," and not a trait susceptible of being bred in or out, or liable to repeat itself. I will not say that it is impossible to breed up a race of horses that could not catch the distemper, but even if that mark could be struck, it is so far off I have no disposition to shoot or even aim at it.

On page 534, Mr. Pond says he does not quite understand me, which, as usual, is correct. I never meant to say, and did not say, and did not write any thing that can be tortured into my saying, or even intimating that the "natural ferocity of the Italians was what made them or gave them the slightest tendency to stick to the combs" when handled. Mr. P. says that he has not yet found any race or strain of bees equal to the pure Italians for indisposition to sting. There are numerous others who have.

HONOR TO WHOM HONOR IS DUE.

Since reading Mr. Fradenburg's article on page 535, I have no reason to doubt his originality in the discovery of the "pollen theory." Mr. Robinson, no doubt, has equal rights to the same claim, and I am quite sure that I have.

At the time that Mr. F. and Mr. R. wrote upon the subject in *Gleanings*, I did not take that paper, but occasionally borrowed copies and wrote an article for it now and then. I never thought or claimed that any positive proof on my part dated from my observation of the condition of my colonies last spring. I thought that, as the best of additional evidence only, I look upon Mr. F.'s experience and observation during the same spring, in exactly the same light.

My article of May 11, 1881, in *Gleanings*, shows for itself that I had for some time entertained the idea that floating pollen in the honey might be the cause of the disease.

On page 409 of the *Bee-Keepers' Instructor* for February, 1881, will be found the following concerning bee-diarrhœa, written by me on Jan. 29, 1881: "For years past I have suspected that the mischief, or first cause, lies in the *honey*, and is produced either by its containing bacteria (living animal germs similar to those said to produce foul brood), or an undue amount of fine pollen always more or less found in honey." But why multiply words? I am pleased to look upon Mr. Fradenburg as a co-worker in our chosen pursuit, and additional evidence to the theory which now remains in little doubt with me.

I have not been working for honors, yet I am not without pride and gratitude in receiving them, which I consider just and right. These honors are like love, they cannot be measured, and were there a dozen of us to share them, there would be just as many for each of us. I am sorry that Mr. F. was silent for so long an interval. I will here invite him to share with me the future labor of defending the theory which we believe to be not only correct, but of the greatest importance to our fraternity, and receive a fair proportion of the slurs of those who are frightened lest some important discovery should be credited to other than themselves.

Of course it is not strange, after my labors in the matter, that bee-keepers should at once respond to the shock given them by Mr. F.'s radical claim of priority; and I here wish to express my thanks, especially to Mr. Hutchinson, for the timely and vigorous defense offered. I think all of us are not only willing but glad to pay the tribute of honor to all who discover and disseminate important truths relative to our adopted profession.

I have had much to do with patent soliciting, and I think Mr. F. is mistaken in regard to who would receive the right, were the discovery patentable; but this point is of no moment in this case, and not worthy of consideration. Let us all rejoice that we are, no doubt, soon to get at the true cause and prevention of the (what has been) greatest enemy to our success.

Dowagiac, Mich., Aug. 22, 1884.

☞ The Progressive Bee-Keepers' Association meets on the first Saturday in October, 1884, at Bedford, O. A general invitation is given.

J. R. Reed, *Sec.*

For the American Bee Journal.

Wintering Bees.

MR. POND'S QUESTION ANSWERED AND ONE OF MR. CLARKE'S POINTS CONTROVERTED.

ALLEN PRINGLE.

On page 524, Mr. Pond asks, "Can any one give me a logical and scientific reason why a strong colony of bees should winter with greater safety on a set of frames from 12 to 15 inches deep, than on a set which are only 9½ inches deep?" In the answer to this, Mr. P. says that he does not want theories. I will endeavor to answer his question with facts and the reasons for them.

In my apiary I use three sizes of frames, viz: 12¾x12¾, inside measurement; 12½ deep by 10¾ wide, and 9 deep by 12½ wide. Other things being equal, the bees winter better on the deep than shallow frames, for this reason: They will not store much honey in the top of a shallow frame, not nearly so much as in the top of a deep frame. In the shallow frame—the brood-nest will extend nearly to the top of the frame, thus leaving but little room for honey. The consequence is, that when the colony clusters for the winter upon frames 1¾ inches apart from centre to centre (and they ought not to be less than that in winter), there will be but a small portion of their winter stores *above* them where it ought to be. I will not stop here to prove that the winter stores ought to be mostly above the bees, but simply postulate it as the proposition will, I presume, not be disputed, being so obvious that it is generally conceded.

Now, in the case of shallow frames 1¾ or 2 inches apart, the cluster of bees 6 to 7 inches in diameter, would only occupy 3 or 4 frames; and the amount of honey stored in these is utterly inadequate to support a colony through the winter, especially in a low temperature. They would have to depend upon a lateral supply which would be quite inaccessible in a low temperature. I do winter bees on such frames successfully, but not in the same conditions otherwise as in the case of those on deep frames. The former must be kept warmer so that they can shift about for their food. In a low temperature they will starve to death when the upper stores are gone, though they may have plenty of the "collateral" to "back them up," at their *sides*. On the other hand, in the case of deep frames, there will be sufficient honey stored above the bees, in connection with that in the two frames immediately on either side of the cluster, to winter a colony inside or out. This, I know to be a fact from long experience.

Before the winter supplies are stored in the hives, the frames upon which it is intended to winter the bees, should be spread apart at least 1¾ inches from centre to centre. This gives room for a wide comb of honey in the top of each frame, and also gives more room and convenience for the cluster beneath. This is a very important matter in successful wintering, and will amply repay the bee-keeper who attends to it.

In the month of August, during the last good honey flow, I always begin to prepare my bees for winter by spreading the frames after extracting, so that a good, thick comb of honey can be stored and capped in each frame. If there are frames with clover honey which I wish to leave for winter, I uncap one or both sides as may be required, spread them out, and the bees will attend to the rest.

In elucidating his "hibernation theory," Mr. Clarke says: "Give bees a chance to hibernate, and they will winter well. To do this, I firmly believe that we must get them up off of the ground." Now, if Mr. Clarke means by this that bees will not winter well on the ground, he is certainly mistaken; and if the fact that they will winter well, flat on the ground in this cold climate, must spoil the hibernating hypothesis, then the hibernating hypothesis must be spoiled.

I have been in the habit, more or less, of wintering bees on the ground. Last winter I had 7 colonies outside, flat on the ground all winter, and they came out in good condition. I am, however, inclined to think that there is, after all, some truth in this "new-fangled notion" which Mr. Clarke has, with great nocturnal travail, brought forth. I think bees do exist, a part of the time during winter, in a sort of semi-torpid state, though not so far gone into "the land of nod" as to be hibernating, in the proper sense of that word. Bees which I have wintering in the cellar, I have found betimes, in a slumber so profound that several pretty hard knocks on the hive failed to bring a response, and when the covering was lifted and the light entered, they showed even then in response to a blast of breath blowed upon them, little sign of life, and less disposition to move. Still, it would be rather too much philological latitudinarianism to say they were "hibernating."

Albeit, there is another apicultural gentleman somewhere in the northern latitudes who can beat Mr. Clarke all hollow in the hibernating idea. At the annual meeting of the Ontario Bee-Keepers' Association, held in Toronto a year ago last fall, the aforesaid gentleman gravely related to the meeting how a neighbor of his had "taken up" a hive of bees in the fall, after the old plan; and after the bees had fallen into the hole in the earth prepared for them, and completely asphyxiated from the fumes of the sulphur, the earth was filled in upon them, and I think he said "tramped down." In the spring they were dug up (whether by accident or design I do not remember), and the redoubtable little fellows were found to be not only alive and smart, but in excellent health and spirits. The gentleman added (as a legitimate corollary of this fact, of course) that the plan of wintering bees after this cheap and convenient fashion was well worth considering. Our enterprising Mr. D. A. Jones said, with dry humor, that he would be quite willing to pay $500 for a queen that would produce bees like that.

Selby, Ont.

For the American Bee Journal.

Do Bees Make Honey or Gather It?

W. H. SHIRLEY.

I have always thought that bees gather honey from flowers just as nature furnished it, with but little change; and that when bees so gathered it from the flowers and stored it in the combs, and when man took this same substance from the bees in the form of comb honey, or extracted it, we had honey in all its native purity. Such honey I have sold for the past ten years with a $500 guaranty of purity, if one pound of the honey sent out by me was not just as left by the bees, and as gathered by them from the flowers.

In the fifth paragraph of Mr. Jerome Twichell's circular, a copy of which is found on page 532, he says that it must be admitted that bees gather honey from a number of flowers, "or from the sugar and glucose barrels found around grocery stores;" and then says that it all becomes honey, that bees cleanse and purify glucose so that it is not injurious but undesirable to eat on account of its flavor. Take 4 pounds of glucose and 1 pound of honey, mix them and then see if you do not have all the honey-flavor one could ask for. Farther, Mr. T. says that bees will store but ½ of a pound of honey from 1 pound of sugar or glucose. I succeeded in obtaining three-fifths of a pound of comb honey from one pound of extracted, this season, and I know of several bee-keepers who claim that they can get back four-fifths of a pound. Let us calculate a little. I think glucose can be bought for from 3 to 5 cents per pound, according to the price of corn; good extracted honey can be had for 10 cents per pound; now take 12 pounds of glucose, 3 pounds of honey, and you will have 15 pounds of glucose, honey, flavor and all at a cost of 90 cents. From this you can get 9 pounds of glucose-honey in the comb, which will bring 17 cents per pound, or $1.53, leaving a clear profit of 63 cents on an investment of 90 cents. Glucose manufacturers had better look this matter up, and if glucose becomes honey after being stored by the bees, my word for it that we bee-keepers who depend upon the flowers of nature for our honey will have to succumb to the glucose manufacturers.

Granulated sugar, at present prices, figures out about the same profit. For instance: Ten pounds of sugar at 7½ cents per pound amounts to 75 cents; 7 pounds of honey at 10 cents per pound amounts to 70 cents; to this add 3 pounds of water and we have 20 pounds of sugar-honey at a cost of $1.45. From this we can get 15 pounds of comb sugar-honey which will bring $2.55, or a net profit of $1.10. The cost of foundation and sections should be taken out of these figures. Now, if I felt so disposed, I could feed glucose to my bees, extract it, and ship it to Mr. T. and warrant it to be pure honey—*i. e.*. if his statements are correct.

Again. what is his guaranty worth, based upon such views? Glucose and sugar are the only things honey is adulterated with to any extent, I think, and if a customer should come back on Mr. T., all that he would have to say would be that "the bees put up the article which I sold you, and so it must be pure honey." There is more comb honey put on the market that contains glucose or sugar than, perhaps, Mr. T. is aware of. I labored hard to convince a grocer in Kalamazoo, last season, that my honey was pure. He said that he knew that there was comb honey put on the market in Kalamazoo that was one-half sugar, and for that reason his customers were afraid to buy honey that is put up in small sections. He said that if he had honey put up in the old-fashion caps, that hold 15 or 20 pounds, he could sell it out quicker than he could if put up in nice, clean, white sections of the one-pound size.

Another grocer in the same place would not listen to me at all, but if I had honey put up in three or four-pound frames, he would buy some. Still another said that I might leave one crate on trial, but he did not think that he could sell it, for people were generally afraid to buy honey that is put up in such nice shape. I told him that I guaranteed my honey pure. In a few days I called on him again, and found the honey all sold at a good figure, and more was wanted. He seemed surprised at the sale of it, and said that the guaranty of its purity was what did it.

Our State Fish Commissioner told me, last season, that it was almost impossible to get a pound of pure extracted honey in the city of Detroit. Only yesterday I was told, by a gentleman who moved from Missouri to this place last winter, that near where he used to live, there was a Doctor who was making money "hand-over-fist" by feeding sugar to his bees and selling the product therefrom, for comb honey. Some way it was found out, and it was reported that for so doing he was compelled to pay some $1,200 in fines.

And now what is the outlook for honest honey-producers (of gilt-edged honey) if Mr. T.'s statements are true? It looks to me as though there might be a crop of honey somewhere if nature did not give us a drop, providing there was not a failure in the sugar or corn crop. I have no doubt of Mr. T.'s honesty and sincerity in his statements, but is he not mistaken?

Oh! for a simple test, so that we may know the pure article from the adulterated one. Who can give such a test? I am willing to pay my share towards discovering one, if it can be had for money. Extracted honey is gaining in favor with us every season. I have already had to buy 1,000 pounds to fill my orders.

Glenwood, Mich.

For the American Bee Journal.

The Pollen Theory.

DR. G. L. TINKER.

It has been plain to bee-keepers all along that to the accumulations in the intestines of bees in winter confinement is due the immediate cause of bee-diarrhœa. The question at once arises, "What are the sources and the nature of the accumulations?" A correct answer will give us a pretty clear idea of the various problems involved and the highway to a solution of them.

But first as to the possibility of voiding the feces in confinement. If bees could void themselves, of course the collections would not occur. We know that the queen-bee certainly does. Why not the workers? I still think they do under certain favorable circumstances, but I am ready to grant that as a rule they do not. Their instinct is so strong against voiding in the hive, that it is doubtful if we ever can rely much on this method of relief. The strongest argument in support of the theory is that they either cannot or do not. But Mr. Heddon does not appear to have noted it.

Now of what do the accumulations consist? First, water; second, the excretions of worn-out tissue and other bodily waste which gives the odor to all animal dejections; third, indigestible refuse of the food taken. As to the first, Mr. H. would hold that it proceeds entirely from an inflamed intestine. But how does he know this? I could grant that it might so arise if I knew that a bee's intestines ever became inflamed. Now this is all speculation. If not, and there is any known evidence that inflamation exists in conjunction with bee-diarrhœa, why has it not been produced before making such an assertion, and, especially, why has the term dysentery been changed to that of bee-diarrhœa? By common consent at the wise suggestion of the Editor of the Bee Journal it has been so changed; but if Mr. Heddon is right in his speculations we will now have to march back to the old term, which is the correct one, if an inflamation of the large intestine of a bee having the well-known discharges, exists. We do not think that an inflamation, as that term is understood, ever exists in a bee, and we have a right to scout the idea until some evidence of it is produced.

The probable source of the water which constitutes the greater bulk of the accumulations, is the honey eaten. The first ray of light which after three years and more of study, I got on this subject, was from reading an article of Mr. S. Corneil, on page 728 of the Bee Journal for 1882. We all know how great is the dampness exhaled by a colony of bees. Mr. S. has shown that at a low temperature the air in a hive may be so completely saturated with dampness, and that very little exhalation of water can take place from the bees, the result being accumulation of water in the intestines with abdominal distension.

But there is another source that must be considered, viz: the moisture collecting on the combs and the sides of the hive which I, myself, have seen bees take up as described by Mr. C. W. Dayton, on page 504. Mr. D. shows there that he could produce the disorder at will by increasing the amount of moisture in the hive by lessening the ventilation. It is almost unneccessary to suggest that this could not be if pollen-eating is "the cause."

Whether the solid matter of the excretions of worn-out tissue and other effete matters is greater or less than the indigestible refuse of the bee-bread consumed, may be hard to determine, but a little reflection should show to Mr. H. that the refuse can furnish but a small amount of the material for bacterious fermentation that is invariably present, and which is beyond question a potent cause. A great many pollen husks may accumulate in a long confinement, but there is also a large amount of purely excrementory product. It is well-known that if a man be thoroughly physicked and subsequently take no food, that the purely excrementory product is considerable for sometime.

My own opinion is, that Mr. Heddon should have stuck to the bacteria theory, as it certainly covers more facts than the latest edition of his views. There is no question about the presence of the bacteria, or of that of the fermentation; in fact, the one is an indisputable evidence of the other. If one species of bacteria may cause the yellow fever, as alledged, why not another cause bee-diarrhœa?

I have thought from the first that there were many causes of bee-diarrhœa operating conjointly and at one time, one and then again another predominating. I am unable to reconcile so many apparently conflicting facts that have been presented in the Bee Journal, in any other way. Probably Mr. Heddon will agree with me on the accumulation theory. Our disagreement is principally upon the nature of the accumulations and the order of the causes leading to them. As to bee-bread, I have shown that the collections are made up of only a comparatively small amount of indigestible refuse, the same being mostly pollen husks; that this aggregation from its very nature is nearly harmless, and as such pollen is recognized as one of the minor factors in the problem of causes. If Mr. H. thinks this is "edging over" to his wonderful theory, he may make the most of it.

My position in regard to the disorder is now well-defined, and in the light of which we will examine Mr. Heddon's arguments as set forth on page 501. As to the primary cause, I have stated that sometimes one and again another cause seemed to predominate; hence, when bees suffer in a mild-tempered cellar, cold is the lesser factor in the list of causes, for anything below 50° Fahr. is cold to the bees. In such cases humidity may be the primary cause, as cellars are always more damp than the external air. Now, Mr. Heddon "finds that bees do winter successfully where severe cold is brought against them;" yet this argument is offered as a clincher against cold being generally the primary cause, and the chiefest feature whenever extensive disasters have occurred. Only half the truth is told. Severe cold of short duration, a month or two, is often safely borne, but protracted severe cold has never in the history of bee-keeping been safely borne. Why, sir, such an argument as this would prove the most improbable cause to be primary! Confinement is a leading factor only when we have long continued cause of unrest, so that "the same line of facts" do not apply as alledged. Against the cause, humidity, there is no attempt made to rate it as secondary. It is "interesting," therefore to note that Mr. H. "errs" in making his first point, and that cold as a primary cause is an impregnable bulwark.

We give our Southern friends credit for their intelligence in perceiving that cold is a primary cause of bee-diarrhœa. And why should they not, since cold is about the only difference between the climate North and the climate South? "Well, they have it" in Missouri, Southern Indiana and Ohio, but that is about as far South as we find it. The disorder in Kentucky 16 years since, according to G. W. Demaree, in a late number of the *Kansas Bee-Keeper*, was not "dysentery" except in a few cases. The bees deserted the combs and hives, leaving all clean and dry. The "unanswerable" argument as to the losses in Southern Indiana has also been fully answered in the *Bee-Keepers' Guide*.

Examples are cited of moving bees, showing that no harm has followed a few moments or hours of agitation. True enough; but this is a small matter compared with the excitement and unrest that proceeds from the severe struggle of month after month with unabated cold. No evidence is given, not even a reasonable supposition why restlessness does not occur until after an overloading of the intestines, as held. Mr. H.'s argument consists in the simple assertion that they are "silly" enough to eat what is not good for them. Bees, he says, will have diarrhœa very soon in summer "if *confined*." There is no doubt of it; but what comes first, the excitement and agitation or the pollen eating? But why eat pollen? Answer: To supply the tissue waste following the wear and tear of wearied muscles. Now, this all comes of instinct or nature's prompting, and no "silly" freak about it. Bees eat the pollen or bee-bread in answer to a law of nature, but there must first be the demand which comes of excitement and unrest. The inducing cause is the same in summer or winter, and they eat much or little according to necessity. If in any case they eat too much, there is a cause for it, and that cause is primary, and to remove which, is to forever prevent the occurrence of bee-diarrhœa. As it is impracticable to remove all of the bee-bread from the combs, or even such amounts as will prevent the bees eating too much when there is a demand for it, we can only deal effectually with the primary or inducing causes. In this Mr. Heddon seems to admit the fact, but denies the induction! He tells us how "silly" bees are to eat pollen, and then infers that if only the greater part is removed they will not touch it. Here is "consistency" for you.

Inordinate consumption of food has been the rule in all cold winters, and harmful accumulations in the intestines of bees the result. No "fatal error" about that. If colonies have died in a non-freezing cellar in less than three weeks, it has been the exception to the common result. And, again, undue accumulations may not have preceded the diarrhœa in this particular case. This loss so oft recited by Mr. H., has been obscure as to cause, because all the facts surrounding it were not known. But as he thinks the cause to be one and inseparable with his theory, he supposes that his bees were "silly" enough to gormandize on pollen without a cause.

Holding such diverse theories on wintering, we do and ought to "differ" in our views. This will be accorded to us; but is it not a little premature thus soon to claim the host of bee-keepers for the theory? Has, indeed, our good fellow bee-keeper such a hold on the fraternity that he may bag their convictions at will? No, we believe that all are thinking this matter over, still looking for "more light."

Yes, there are bee-keepers "way up North" to the 43 and 44 parallels, who can winter bees, but they give ample protection, use very large well-packed ventilated-hives; or thick-walled bee-houses. In these the loss has been trifling, in careful hands, but there is greater expense at the outset, perhaps not in the long run. Cellar wintering is the cheapest, tollerably-safe plan. These statements are not inconsistent with my expressed views, nor is it at all necessary for me to show that there are as many pollen-bearing weeds a little farther North than round about Dowagiac. But why introduce this argument if I were so inconsistent?

Mr. Heddon is very happy at grasping my ideas. He inquires why I have not offered "any reason why sugar syrup is any better than honey as a winter food." He has "done so," etc. It is simply because it possesses greater "heat-producing elements" than honey. Our friend has stated it heretofore "more-highly oxygenized." Now the language used on page 440 of the Bee Journal of 1883 is good enough. We presume it was an oversight not to give me credit. The point, however, is this: If the pollen theory is true, honey is good enough to winter bees upon, as the assumption that it contains enough floating pollen to make it objectionable, is not true. Not enough pollen could be found in ten pounds of honey to distend the body of one bee. Honey extracted from the brood combs might, but not that from the supers. And I do not think there is enough floating pollen in extracted honey to affect the bees one particle.

The indisputable fact is, that sugar syrup is a better winter food than honey, because it furnishes so much more heat to the bees that there is little if any necessity for nitrogenous food; hence, they are disposed to let bee-bread alone when they have a food so strongly heat-producing that they can keep warm and comfortable without vigorous exercise.

In making the statement that in a winter like that of 1880-81, the half of his 45 sugar-fed colonies might have been lost, it was presumed that in making the great test of last winter, Mr. H. used only single-walled, eight-frame hives and no protection. With these conditions, I repeat that such loss would be probable in a hard winter.

My theory of successful preparation for winter may be summed up in a few words. Let the bees store all the pollen they want to, but take from all colonies the combs not required to hold the necessary winter stores. Contract the brood-chamber as much as possible, remembering that six Langstroth frames will hold ample stores for the strongest colony to last from November until May. Extract no honey, but feed to each colony a few pounds of granulated sugar in the form of a moderately-thick syrup, or enough to make out sufficient stores. Give large, lower-ventilation, very little upper, and winter in the cellar, or protect well with forest leaves on the summer stands.

New Philadelphia, O.

For the American Bee Journal.

County Convention in Indiana.

Pursuant to a call, the kee-keepers of Hamilton and Tipton counties, Ind., met at Ekin, Tipton county, Ind., on Thursday, August 7, at 10 a. m.

Considering the busy time in threshing wheat in that vicinity on that day, the meeting was attended by 150 or more, in the beautiful grove of Mr. H. Small. A deep interest in the advancement made in bee-culture, largely added to the encouragement of those taking an active part in advancing the cause.

At 10 a. m. the meeting was called to order by David Leaming, president, who also delivered an address, after which the constitution, by-laws and minutes were read by the secretary. After other business was attended to, the following officers were elected for the ensuing year: President, David Leaming, Arcadia; vice-president, C. C. Richerson, Tipton; secretary, John Fritz, Shielville; treasurer, J. McKee, Arcadia.

This was followed by a few discussions on practical bee-culture, after which a hearty dinner was partaken of.

At 1 p. m., the president again called the meeting to order, and the query-box was again opened, and lively discussions followed on various useful topics.

The next meeting was appointed to be held in Arcadia, on the first Thursday in Nov., 1884, at 10 a. m.

JOHN FRITZ, *Sec.*

Prairie Farmer.

Killing Drones.

MRS. L. HARRISON.

Bees are very energetic little insects, and if they cannot find one kind of work to do, they will find another. If honey is not to be found in the floral kingdom, they seek sweets elsewhere, and penetrate groceries and warehouses, gathering up leakage from sugar-barrels and hogsheads. They even turn outlaws, and pillage their neighbors of their garnered treasures. When their out-go exceeds their income, they reduce the number of consumers by killing off the drones. It is pitiful to see the poor drone led out, like a drunken fellow with a policeman at each side. His pleading buzz does not cause them to relax their hold, and occasionally another comes and jumps upon his back. The drones band together for self-protection, running their heads under one another, until they look like shingles over-lapping each other. Their pitiless persecutors have no mercy, and they are doomed to die of starvation and cold, clustered in the portico of their former home, where they had been reared so tenderly. Bees have been busy, lately, driving out the "dead-heads," carrying water, and gathering bee-bread. They collect a little honey each morning, and keep from having the dyspepsia by propolising the cracks and crevices of their hives, making all snug and warm for the approaching winter.

Peoria, Ill.

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For the American Bee Journal.

Theories About Wintering Bees.

LEVI C. JOHNSON.

> "Some words on theories may be well applied,
> And take them kindly, though they touch your pride."

Dampness, cold, confinement, bad honey, diarrhœa, pollen, each of these and many others have been given as the one cause for the loss of our bees in wintering, and we have had theories based upon each of them. All the theorists have supposed that their pet theory was capable of accounting for all winter losses. The very latest is that brilliant conception evolved from the inner consciousness of Wm. F. Clarke, viz: that our losses are due to the fact that we do not supply the conditions favorable for the hibernating of our bees.

That any one of these theories can furnish an Ariadnean clew which shall guide us out of the labyrinth of winter dangers, past the sirens of early spring into the summer of safety, is, I think, not true; because the dangers to our bees arise not from one source but from many, and hence there is no one danger-point which, being passed, ensures safety from all the storms that blow.

We may pack our bees so warm that winter's chilling blasts can no entrance find, but this will not shield them from the deadly carbonic dioxide exhaled from their own lungs into their homes of comfort. We may so ventilate the hives from below that this death-dealing gas (which is heavier than air) will flow out from the bottom of the hives; but this does not protect them from the moisture which, rising from the cluster and condensing upon the top-wall of the hive, flows down upon the combs producing their fungous growths (moldy combs), disease and death. We may by upward ventilation keep them dry, but if we have not seen to it that they were supplied with proper food, from their long confinement, there will be inflamation of the intestines, diarrhœa and death.

But even if precautions have been taken against all preventable ills, there remain yet dangers from sudden and excessive changes of temperperature, from spring warmth starting brood-rearing, then protracted cold and confinement coming upon the colony under unfavorable conditions, causing disease and death. So it is altogether unlikely that we shall ever be able to say, "Now is the winter of our discontent made glorious summer" by the valorous Heddon or Clarke, or I may add, by any other one man, for it is by the united labor and observation of "many men of many minds," in many lands, that the art of apiculture is being put upon a sure and safe foundation.

The apicultural world owes and gladly pays great homage to the masters of entomology for their solid work for this branch of natural history; and the names of those brilliant French men, Reaumur, Latreille, and Cuvier; of the solid German, Swammerdam; of the "great Swede," Linnæus; of the unconquerable Swiss, blind Huber; and of that clear-headed Dane, Fabricius, will ever be spoken of with veneration and honor. But these were men who by a life-time of earnest work gathered facts from which they deduced broad generalizations of truth which have made strong the foundations of science. Coming to the men of our times, we delight to honor the names of Langstroth, Dzierzon and Quinby as men who sought after truth, and instead of theory they have given us facts.

While it is true that theory oftentimes goes before and points out the way whereby we may find the facts, yet we can much better serve the interests of science by each one adding his mite to the sum of human knowledge, than by striving to establish some pet theory as the "*ne plus ultra*" of our art. We should recognize the fact that we have not only a Scylla and a Charibdis to pass, but that the whole winter voyage is beset with dangers to our bees; and recognizing this fact, we should not expect one theory or one precaution to carry us through the winter with safety.

A plan which has been successful with me is to put the bees into the lower story of their Simplicity hives upon a platform 6 inches from the ground, which platform is covered to a depth of 8 inches with sawdust, on this the hives are set side by side in close contact. Side-walls are then placed all around 6 inches from the hives; with an opening one inch in height in front of the entrances of the hives, 6-inch planks are then fitted between the hives and side-walls above the entrances of the hives which are thus left open to the full summer-size. The spaces between the walls and hives are now filled with dry sawdust, and well packed. The cover is removed and a cotton cloth spread over the frames, and 10 inches of chaff or 8 inches of very dry sawdust put in. The roof-boards are carefully laid on an inch or two above the chaff, and 4-inch alighting-boards are placed at the entrances, and the thing is done, making a very cheap and, I think, a safe winter protection.

I do not think it necessary to remove any of the ten frames, nor any of the pollen, but only see to it that each hive contains 30 pounds of good honey (or pure granulated sugar made into syrup and given early enough in the fall for the bees to have it sealed in the combs). If this amount of pure food is supplied, I should have no fears about pollen, for if the hives are packed as above stated, there will be warmth enough in them to enable the bees to procure their food from any part of the hive, and their own instinct can be safely trusted to use only such food as their conditions demand.

The above plan avoids danger from dampness by the upward ventilation through the cloth and chaff; from cold, by the thick packing; from confinement, by enabling the bees to fly whenever the weather is mild enough; and from diarrhœa by the good hygienic conditions surrounding them. Bees having pure air, pure food, and comfortable quarters will very rarely suffer from diarrhœa. As to danger from the want of hibernating: As Mr. Clarke alone has found the danger, so he alone has found the remedy, and I presume he alone will apply it.

Fountain City, Ind.

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For the American Bee Journal

Planting for Honey.

CLARENCE M. WEED.

I have just visited the College Apiary, and have been struck with the practicability of Prof. Cook's oft-repeated advice to plant for honey. Around the hives the Professor has planted a series of beds, about 5 by 8 feet, of Rocky Mountain bee-plant, motherwort, figwort, catnip, mustard, borage and white, Alsike, and sweet clover.

In the present dearth of honey-supply the Rocky Mountain bee-plant, mustard, borage, motherwort and sweet clover are in full bloom, and keep the bees very busy.

The idea of planting so as to have bloom in a time of general dearth is well worthy of consideration by practical apiarists. Mustard blooms in about six weeks after planting, but it may be made to blossom at any time by judicious mowing. The same is true of many other plants.

Planting for honey has often been recommended, but the idea of keeping bees to aid in the successful production of garden and field crops is much more recent. In a late Experiment Station bulletin, Dr. E. Lewis Sturtevant says:

"Our bean crop is dependent in a greater or less measure upon other agencies than the fertility of the soil or the character of the seed used. It may seem curious at first that our farm crops should depend upon such small agencies as insects, and yet without insects to carry the pollen from flower to flower, in some species of plant we would have no seed produced. A true list of insects beneficial to vegetation should include in addition to those which are destructive to injurious insects, those also which are beneficial to the plant. The scarlet runner bean is an excellent illustration of our remarks. This bean never seems to produce seed except when the flowers are cross-fertilized, and in Nicaraugua, where insects of the proper kind do not exist, this plant is said to be sterile. If there were no insects to convey the pollen from flower to flower, this species might be as sterile in our Northern localities. The bumble-bee, however, frequents these flowers, and in seeking the nectar brings its head in contact with the pollen, which, adhering to it, is conveyed to the next flower visited, and is brought in contact with the pistil."

He also advises "the bean-grower on a large scale, to keep a colony of Italian bees in the vicinity of his fields, for the purpose of effecting the cross-fertilization of the flowers, and thus adding increase to his crop, upon the possibility that these bees might be effective for this purpose."

Michigan Agricultural College.

For the American Bee Journal.

Is it Lawful to Keep Bees?

W. H. STEWART.

Much has been written on the subject, "Who should keep bees?" but now it appears that the question is, whether any one shall be allowed to make apiculture a business. One of my neighbors, Mr. F., has for several years kept quite a large apiary and a fruit nursery, and has made a success of them. Mr. F. now informs me that a certain farmer near him is about to commence a suit against him, for damages done by the bees. The farmer claims that the bees trouble his sheep and other stock, and prevents them from feeding on the clover pastures. Also, that the clover honey belongs to him (the farmer), and not to Mr. F.; that the bees are trespassers on his farm; and, further, that bees injure his other farm crops.

Mr. F. informs me that there is no doubt but that he will have to defend himself against these charges, and that he calculates to defend to the bitter end, if necessary. All bee-keepers will see at once, that if in this suit it is decided that Mr. F. must discontinue the bee-business, that the decision affects all bee-keepers in the land; hence the importance that each and all see to it at once; that every truth and fact evolved by scientific research and experiment, be published at once in the BEE JOURNAL. Will Prof. Cook and other scientists give us the full benefit of their knowledge of the laws of co-operation and inter-dependence of insect and plant life. Let all practical bee-keepers give what they have learned by experience and observation on this subject, and what they could state under oath in regard to this matter,

Must we all, just now, be compelled to abandon our pursuit? Must ignorance or malice annihilate all the capital invested in apiculture? Shall the human family be thus deprived of the only pure sweet now obtainable?

Shall ignorance of bygone days,
  Successfully dispute our ways?
Shall law submit at its command,
  And science blush to show her hand?
Shall evolution hobble back,
  And frightened growth retrace her track?
Shall reproduction hide her face,
  And wild confusion take her place?
Shall blooming plants withold their sweet,
  And hence no more co-operate
With insect life—turn celibate,
  And fertilizing pollen hate?
Shall Order's climax be reversed,
  Truth be a lie, life be a farce?
Insulted Reason answers *No!*
  And swears these things shall *not* be so.

Orion, Wis., Sept. 1, 1884.

For the American Bee Journal.

The Holy-Land Bees.

HENRY ALLEY.

Mr. Daniel Howard, of Wisconsin, paid me a visit, last fall, while on his way to Palestine to obtain some Holy Land queens. Mr. Howard arrived in Palestine some time in December last, and reached Wenham, Mass., on his return, on Aug. 8, with but 12 living queens out of the 175 which he started with. This was a serious loss and disappointment to Mr. Howard, as he had hoped to preserve such a number of queens as would have paid the expenses of the long trip which he had made to obtain them. However, Mr. Howard was not discouraged, and though he is a man 65 years of age, he is willing to go again, provided he can make arrangements for the disposal of the queens on his return home. He has no doubt about safely bringing another lot through.

The queens were packed in small boxes, in which were four compartments; two for the food (Good's), and two for the bees. He made a mistake in not making holes in a solid block of wood for the food, as the honey ran through under the partitions which separated the bees from the food; consequently the bees were badly daubed and drowned in their own sweets.

When the boxes were opened, there were 12 queens alive, but not one live worker-bee; and judging from the appearance of the bees, they must have been dead several weeks. The queens were lively and quite active. I immediately introduced them to some queenless colonies, and in a short time they did not appear to be any the worse for the long journey which they had made, and the confinement of 45 days, most of the time unaccompanied by any bees. In the course of a week nearly all the queens commenced to lay.

While in Palestine, Mr. Howard wrote me several times concerning the Holy Land bees. He found them the gentlest bees that he ever saw. Mr. Howard's experience with these bees has been more extensive than any bee-keeper in America. He has seen and handled them in their native country.

Of their honey-gathering qualities, Mr. Howard says that while in Palestine, he often visited the apiary of the Baldensperger Brothers, from whom he obtained the queens. With only between 50 and 60 colonies they had taken 5,800 pounds of honey, 5,200 pounds of which were taken in 16 days. How many apiaries of this same number of colonies in America can make such a good report?

Wenham, Mass.

For the American Bee Journal.

Bee-Keeping in Cuba.

A. W. OSBURN.

We are in the "summer of our discontent," for we are having something more than a partial dearth of honey when every colony in the apiary is looking to its next-door neighbor to see where the weakest point is, that a successful attack can be made. For several weeks there has been but little honey secreted in the flowers, and owing to the great increase of colonies which we have made, many of them are out of honey, and feeding had to be resorted to, in order to save those that had not time to gather stores for themselves before the honey flow ceased. We expect this state of affairs to last until Sept. 15, when the fall flowers will begin to yield honey, and then there will be an end of the dearth of nectar until the middle of next April; so if we do have, at the longest, two months' dearth of honey, it beats six months of zero weather that the bees have to endure in the North.

FERTILE WORKERS.—A fertile worker never bothers me but a few days, for as soon as I find that a colony has fertile workers, I introduce a full sheet of hatching brood, and just as soon as those young bees are out, I give them eggs and larvæ, and they never fail to rear a queen; for the young bees will not tolerate the presence of a laying worker when the opportunity is given them to rear a queen. That is something that bothers us but very little; and in this apiary of 500 or 600 colonies, we seldom have such a case. But we have our own troubles, and to us they are of a more serious nature than the presence of laying workers; *i. e.*, to keep the bees from superseding their queens so often and so much. In all my experience in handling bees, I never had one-fourth the trouble that I have had in the last ten months in Cuba. I have resorted to all the devices that my experience could suggest, but all have failed to remedy this serious trouble. Any suggestions from my fellow bee-keepers in relation to this matter would be most gratefully received.

I am in hopes, if the above named trouble can be stopped, to be able to make a favorable report of modern bee-keeping on this Island. That the natural honey-resources of this country are superior to any country I ever saw, I am convinced; and coming as it does, in the winter, makes it doubly advantageous to the apiarist, for it is at a time of the year when there is not the least danger of swarming, and however strong you build up the colonies, they will stay together and attend strictly to the business of honey-gathering. Such a state of affairs would be called a great boon, indeed a fortune, in the North, and in reality it would be. We are going to try the experiment of producing comb honey during the coming winter, and it is my impression that it will be a grand success, for the honey-flow is of long duration, the honey is white and of fine flavor, and the comb is as white as any that ever was produced from white clover or basswood; and owing to the great length of the honey-season, a great number of sections can be filled and finished by a single colony.

Cuba, W. I., Aug. 15, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Queries.

1. When parties advertise "Warranted Italian Queens for Sale," what are buyers entitled to?

2. Is C. C. Miller, of Marengo, Ill., the one who used to sign his name in "Song Messenger," "P. Benson, Sr.?"

I received 300 pounds of comb honey from 7 colonies, and increased them to 16. JOHN O. BRANDON.

New Palestine, Ind., Aug. 22, 1884.

ANSWERS.—1. That is according to what the queen is "warranted" to be or do. Until recently the terms "tested," "warranted," and "untested" meant as follows: A tested Italian queen was one that had been held by the one who reared her until all her progeny were seen by him to possess three yellow bands. A warranted queen was one not so tested, but warranted to stand that test in the apiary of the purchaser, which, if she failed to do, another would be sent. An untested queen is the same as the warranted queen, only without any guarantee as to what the workers would be. These queens were all to be reared from pure mothers, and all the terms have reference to the purity of the queens and their offspring. Many queens are now reared and tested for qualities instead of color. A whole year instead of 25 days being devoted to the testing of queens. Warranted queens are generally left out of the catalogues at present.

[2. Yes.—ED.]

How to Winter Bees.

1. How do you arrange the hives for cellar-wintering? and also the cellar? Do you consider the cellar preferable to your out-door packing, in this latitude, southern Wisconsin? I have wintered bees for 11 seasons, but never with as good success as last winter, and that was with your out-door packing arrangement. It is more work, and I think that it takes more honey.

2. What grade of sugar do you use for winter feed, and how do you make the syrup?

3. Have you ever tried perforated zinc for keeping the queen out of the extracting supers? If so, what is your opinion of it? I use your honey-board and comb-honey case, and in using 100, I had no trouble with the queen above, except in two cases; but in the extracting hives the queens went through the honey-board in two-thirds of the hives, after the combs were extracted and put back; and in a few cases they went up and took possession before any extracting had been done. They were not crowded with honey below, but were all full of brood. E. J. SCOFIELD.

Hanover, Wis., Aug. 25, 1884.

ANSWERS.—1. I consider the cellar preferable to out-door wintering in your climate, as a rule. My preferred plan of arranging the hives is to remove as much honey and bee-bread as possible, and feed sugar syrup. Also reduce the combs to about 5 in number, give the hive all the lower ventilation that you can handily, and but little upper ventilation which I would prefer should pass through a quilt, mat, cushion, or what I use, 2 inches of planer shavings in a box with a cloth bottom. Regarding ventilating the cellar, I know but little about what is required. Certainly pure air will do no harm. I prefer a cellar deep in the ground, with not too many colonies in it, and to keep the temperature as steadily at about 45° as possible. All this is mostly theory.

2. I use the best grade of pure granulated sugar. I boil it in a copper pan that covers the whole top of a stove. The pan is 24x28 inches, and 9 inches deep. It will conveniently take a half barrel of sugar at a time. The following is the proportion: sugar, 10 lbs.; water, 6 lbs.; cream of tartar, a level tea-spoonful, or tartaric acid, a lump the size of a large pea. First put in the water and bring to the boiling point, then throw in the acid; have a wide wooden paddle and stir the sugar as you dip it into the water, that it may dissolve before it settles to the bottom. Boil it 5 minutes, and then remove it; when it has cooled down so that it is just warm, it is ready to feed. We use a feeder that covers the whole top of the hive and holds from 15 to 18 lbs., with net-work inside to prevent the drowning or daubing of the bees. We feed in the evening, and are very careful to avoid danger of robbing. Three men feed 1000 lbs. in an hour. Should you feed too late in the season for the bees to evaporate the syrup to the consistency of good, ripe honey, you had best make it so in the first place, by using 3 lbs. instead of 6 of water, to every 10 lbs. of sugar. I trust that this will answer the same question asked by several correspondents. If I have omitted any point desired, ask for it through THE BEE JOURNAL.

3. Yes. We experimented with 4 zinc honey-boards last year, and some 20 this year. We are not yet satisfied that it is practical or best to use the perforated zinc any where. We feel that we need another season, and more zinc, to test it to our satisfaction. For comb honey we know we do not need it, much preferring the wood, skeleton honey-board, which is preferrable everywhere, and for all purposes, except for excluding the queen. Should we find them possessing no serious drawback, and successfully excluding the queen, we should like them between brood-chambers and extracting-supers. We know that the queen goes through the skeleton honey-board into the extracting-supers just as you say, but this action has *some* advantages, and its disadvantages are quite easily gotten along with, after getting used to them.

How to Ventilate Cellars.

1. How shall I ventilate my cellar for 125 colonies of bees? It is under a part of the house not used by the family and no fire is used above it, with an inside and outside door. It is 8 feet deep, and 20x30 feet in size, all under ground, the wall is laid up without mortar, and a flue extends down into it. I can drain it by digging about 3 rods. How will it do to lay large drain-tile below the frost point? How large should they be? Is that far enough to modify the air sufficiently so that the bees will not be disturbed by a continual draft?

2. Are the fumes of a wood-stove injurious to bees in confinement?

F. MINNICH.

North Freedom, Wis., Aug. 29, 1884.

ANSWERS.—1. So far as I know the cellar-ventilation question is one of minor importance in wintering bees. I say this because I have seen bees winter so nicely in cellars with no ventilation, the air seeming very foul;

and, again, I have seen diarrhœa in its worst form in well-ventilated cellars. When we learn how to, and do winter our bees without the disease, we will then be able to find out the best methods of ventilation, and the importance of their use. I think you do not need any artificial heat, for the temperature sustained by the earth and 125 colonies of bees will be high enough at all times. I think that the probability of bee-diarrhœa does not rest with any method of cellar-ventilation.

2. No.

SELECTIONS FROM OUR LETTER BOX

Honey for Children.

The most discouraging part of bee-keeping, to me, is disposing of the honey at a paying price. If it would sell in the market like butter or cheese, it would be a great relief to me. I wonder why parents do not buy honey for their children instead of adulterated candy that will kill "40 rod." R. BACON.

Verona, N. Y.

Half a Crop of Honey.

We have little more than half a crop of honey here. It has been very cold all through the summer. We have no basswood.

M. L. SPENCER, 81-107.

Little Genesee. N. Y., Aug. 26, 1884.

Aster.

Please give the name of the enclosed plant. It grows plentifully here, and the bees work on it all the day long. JAS. ELLIOTT.

[It is an aster—an excellent honey-producer.—ED.]

Direct Introduction of Queens.

"Direct Introduction of Queens," as advised by S. Simmins, on page 456, has worked much damage here. Every one of the pupils in bee-keeping in this vicinity, have tried his plan, and in every instance failed; and to any one who understands the natural laws governing the honey-bee, it is simply absurd. I am satisfied that no queen was ever accepted in that way by a colony in normal condition, and it is right that they should not, or how would they protect their hives without this trait. I thoroughly tested it myself. Three colonies were selected, one being gentle Italian, one hybrid, and the other black, all had laying queens, which were removed with a frame of brood and bees, and the frame of brood and bees from nucleus with laying young queens given as directed, and the hive closed gently. Now for results: In 45 minutes the queen and every bee were dead and tumbled out of the hive of the gentle Italian and hybrid colonies, but the blacks merely balled the queen, and the next morning she was found outside, but the bees were not killed in that case. The nuclei were all fine Italian bees and queens. It is needless to say the result was precisely as I told the lookers-on that it would be, and each one acknowledged it to be like their own cases. We have had two weeks of hot weather, but to-day it nearly freezes again, just like the weather of June and July. No fall honey here. We have our colonies about ready for winter, but have to record the poorest season in 10 years.

E. A. MORGAN.

Columbus, Wis., Aug. 25, 1884.

Garden Carrot.

I send you a blossom, will you be kind enough to tell me what it is, and whether it is a good honey-plant?

Wilcox, Pa. A. T. ALDRICH.

[This is the common garden carrot. It is becoming very abundant in some parts of the country (Middle and Eastern States) as a weed in fields and along the roadsides, as the parsnip is in the richer soils of the West. It cannot be recommended as a valuable honey-plant.—T. J. BURRILL.]

Worst Season within 12 Years.

The honey season is over, here in the southeastern part of this State. Every thing is drying up. We have had no rain since July 4. Bees are idle the whole day long, for neither the buckwheat nor the goldenrod have secreted any nectar. Spanish-needle cannot thrive on account of the drouth. I can report but half a honey crop this season, yet the 31 colonies which I have, are in good condition; but if it does not rain soon so that they can gather some honey, I will have to feed them. In short, this is the worst season since 1872. J. W. STURWOLD.

Haymond, Ind., Sept. 1, 1884.

Bee and Honey Show at London, Ont.

Bee-keeping in this part of Canada has been very successful this year. We have had the nicest kind of weather, and the bees have done their part by gathering a large quantity of the best kind of honey, although the basswood yield was very limited. We had a very large amount of white clover, and there was lots of it in bloom on Aug. 1. I noticed a peculiarity about my bees, and a number of others have mentioned it—they swarmed without hanging out at all. Two of mine absconded in that manner, although the ½ story was on and not half full of honey. The bee and honey show at the Western Fair, to be held in this city during the last week in September, promises to be the best ever held in this part of Canada. Special rates on all the leading lines of railroad will be offered, so that a large number of the United States bee-keepers are expected to be present. During that week the Middlesex County Bee-Keepers' Association meet in the Board of Trade rooms, which was kindly offered them for the occasion. Again, I extend an invitation to the United States and Canadian bee-keepers to come to London and let our honey show be one that will advertise the industry and open the eyes of the people to the fact that "there is millions in it."

WM. H. WESTON.

Honey-Dew for Winter Stores.

I have talked with several bee-keepers about this honey-dew or bark-louse honey, and we would ask Prof. Cook to tell us, through the BEE JOURNAL, what he thinks about its use for winter stores. It has been said that early-gathered honey, well-sealed, was all right to winter on, but a good many bee-keepers are a little afraid of this nasty, black stuff. L. FATZINGER.

Janesville, Wis.

[Where the stores are black and disagreeable to the taste, I should fear to use them for wintering. This insect-secretion is becoming quite a serious matter. It so perfumes the air that some bee-keepers have been anxious for fear that their bees had the "foul brood." In riding along the country, we often find the air odorous for rods away from it, only here it comes from the trees instead of the hives. Unless the honey tastes good, and would do to put on my table, I should exclude it from the hives in winter.—A. J. COOK.]

Only Half a Crop.

The honey crop in this section is only about one-half a crop.

Cuba, N. Y. F. A. BURRILL.

Honey-Dew.

I notice on pages 536 and 537, articles from W. C. R. Kemp and J. A. Bayard, asserting that it is impossible for honey-dew to be the result of plant-lice. Such assertions are made in the absence of close observations and experiments. That scientists are sometimes mistaken, I know; but it is generally by taking other mens' views without personal observation and experiment. It does not take a scientist now, in this age of progress in apiarian knowledge, to decide where honey-dew, at least some of it, comes from; but a common bee-keeper can, if he has the opportunity, satisfy any one on this subject. During the drought of last autumn, a large willow tree in this section was found to be covered with plant-lice. The ground, grass and fence under the tree were in a sticky mass with evaporated honey-dew. Upon taking a position in the morning or evening so as to bring the space between the branches and ground between us and the sun, the "vile stuff" could be seen falling, in the shape of fine rain or mist, in such quantities that the bees and flies could not take care of all of it. Upon closer examination, since it has been proven that it was exuded by these same plant-lice.

Webster, Ind. I. P. C. STEDDOM.

Special Notices.

The Bee Journal for 1885.

$25.00 Cash Premiums.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2 00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

* * *

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

* * *

Notice to Correspondents.

Examine the **Date** following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ In reply to many correspondents let us say that we take any kind of postage stamps as money, but coins should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports — a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

* * *

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

* * *

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

* * *

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

* * *

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

* * *

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

A **BEE-KEEPER FROM IRELAND** wishes to get on a Bee-Ranch. He understands Modern Bee-Keeping, and the care of cows, horses, etc. Address MICHAEL BUTTLER.
37A1t 846 Howard St., San Francisco, Cal.

ELECTROTYPES

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street **Chicago, Ill.**

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

◆

☞ A Canadian wishes us to state in the BEE JOURNAL, whether we take Canadian money for subscription or books. We do; and for fractions of a dollar, Canadian postage stamps may be sent.

◆

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

DR. FOOTE'S

HAND BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25** Cents. Sent by Mail, post-paid,

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

PURE HOLY-LAND QUEENS.

Howard's importation of Holy-Land Queen are the only pure queens of this race in this country. We have 2 of the finest queens that Mr. H. imported, and will have by Sept. 15, 100 young queens from them. They will be fertilized 3 miles from all other bees, and we guarantee them to be equal in every respect to the imported queens. Price, $2.00 each. A copy of the Bee-Keeper's Handy-Book or one of our combined Queen and Drone Traps will be given with each queen. We can send you as fine Italian or Albino queens as can be purchased in the world. Warranted queens, $1.00 each; tested, $1.50; select-tested, $3.00 each.—Secure your breeding-queens for another season.
37A4t HENRY ALLEY, Wenham, Mass.

NEW SWEET CLOVER (MELILOT) SEED.—We are now prepared to furnish New Crop Melilot Clover Seed as follows:
By Express, 20c. per ℔; by Mail, 36c. per ℔,
37A1t C. H. DIBBERN & SON, Milan, Ill.

BEES FOR SALE.

I offer HYBRID BEES for Sale in Langstroth or other hives, with 30 lbs. of good honey for wintering. Price, $4.00 per colony. R. S. BECKTELL.
37A3t Three Oaks, Mich.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

LOCAL REPORTERS WANTED.
We want an agent and local reporter in every community to represent **City and Country,** and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A18t

FDN. MILLS. 10 INCH $ 15.00
W. C. PELHAM,
MAYSVILLE, KY.
37A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.
Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

65 *ENGRAVINGS*

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

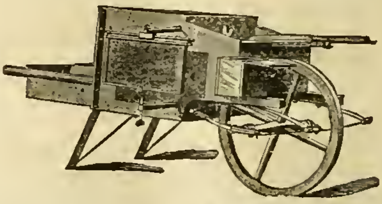
THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

ITALIAN QUEENS, DADANT FOUNDation, and Supplies.—It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
4A1y

SYSTEMATIC AND CONVENIENT.



DAVIS' PATENT HONEY CARRIAGE,
REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only............$18.00.

For sale by **ALFRED H. NEWMAN,**
923 West Madison Street, CHICAGO, ILL.

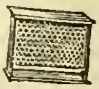
HIGH-GRADE QUEENS.—In closing the Queen trade for this year, I have some fine high-grade "business" Queens, which will be sold for **40 cents** each. Fine breeding Italian stock for sale. G. W. DEMAREE, Christiansburg, Ky.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.
D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

For Bees, Queens,
Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to
FLANAGAN & ILLINSKI,
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

Prices Reduced.

Owing to a decline in the price of Beeswax there will, hereafter, be a reduction of

5 cents per pound

on all orders for Comb Foundation,

I pay **26c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

ALFRED H. NEWMAN,
923 West Madison St., CHICAGO, ILL.

DOUGHERTY & McKEE,

Indianapolis, Ind.,

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** Langstroth HIVES a Specialty. Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars. Send for our **Price List.** 14A26t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

THE
WORLD'S
INDUSTRIAL AND COTTON CENTENNIAL

EXPOSITION
New Orleans.

Opening December 1, 1884; Closing May 31, 1885

— UNDER THE AUSPICES OF THE —

United States Government.

$1,300,000,
Appropriated by the General Government.

$500,000,
Contributed by the Citizens of New Orleans.

$200,000,
Appropriated by Mexico.

$100,000,
Appropriated by the State of Louisiana.

$100,000,
Appropriated by the City of New Orleans.

From $5000 to $25,000,
Appropriated by Innumerable States, Cities and Foreign Countries.

Every State and Territory in the Union represented, and nearly all the Leading Nations and Countries of the World.

The Biggest Exhibit, the Biggest Building and the Biggest Industrial Event in the World's History.

APPLICATIONS FOR EXHIBITS ALREADY RECEIVED COVER MORE SPACE AND A GREATER VARIETY OF SUBJECTS THAN THOSE OF ANY EXPOSITION EVER HELD.

The cheapest rates of travel ever known in the annals of transportation secured for the people everywhere.
For information, address
E. A. BURKE,
Director General, W. I. & C. C. E.,
NEW ORLEANS, LA.

Syrian-Albino Queens!

Reared by a **NEWLY DISCOVERED** method. Every Queen a marvel of fine development, BEAUTIFUL coloring and vigorous qualities.

WARRANTED UNEXCELLED.

Select-Tested, to breed from $3.00
Untested $1.50

Address, **DR. G. L. TINKER,**
30Atf New Philadelphia, Ohio.

GREAT SAINT LOUIS FAIR,
October 6th to 11th, 1884,
OPEN TO THE WORLD

Entries, Spaces, Stalls and Pens Free to all Exhibitors.

$50,000 CASH PREMIUMS!

APIARIAN Exhibits the LARGEST in the World!

HALF-FARE RATES on all Roads during the Fair.

REGULAR LIVE-STOCK SALES DURING THE FAIR.

☞ For Illustrated Premium Lists, or information, address the Secretary. ☜

FESTUS J. WADE, Secretary. **CHARLES GREEN, President.**

35A4t

DUNHAM COMB FOUNDATION MACHINE.

TESTIMONIALS.

Hamilton, Ill., Dec. 10, 1883.
MRS. FRANCES DUNHAM, De Pere, Wis.
Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.
Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.
Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.
All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.
Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNHAM: Kenton, Ohio, Dec. 29, 1883.
After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.
I made all brood on Dunham mill, and that I believed it by far the best for that purpose, and as further proof, instance the testimony of E. Kretchmer, of Coburg, Iowa, and L. C. Root & Bro., of Mohawk, N. Y. Messrs. Root & Bro. have only used brood foundation of me, and in a later communication say: "It (our foundation) gave the best results of any tried." I write this that you may have fair play, which is to me always a jewel. You are at liberty to publish this. Yours truly, T. L. VON DORN.

Send for description and Price List to
FRANCES DUNHAM, De Pere, Wis.

2BCtf

BUY AN ESTEY ORGAN

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

ESTEY & CAMP,
188 and 190 State St., CHICAGO.

1868. 1884.

HEDDON'S COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from	$ 3 00
Untested	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Sixth Thousand Just Published!

New and Enlarged Edition
OF
BEES and HONEY,
OR THE
Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

---

J. W. ECKMAN,
DEALER IN
Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

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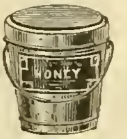
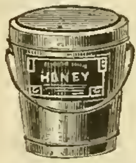
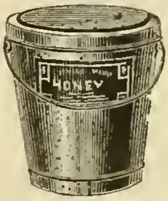


NEW HONEY PAILS





The accompanying illustrations show a nest of pails with the sides tapering, for marketing extracted honey. The covers are deep and the pails are made with special reference to filling them for the retail honey-trade. They are made in a superior manner and are quite attractive in appearance, when filled and nicely labeled.

	4 lb.	7 lb.	13 lb.
Per doz.	$1.25	$1.60	$2.00
Per 100	8.00	10.00	14.50

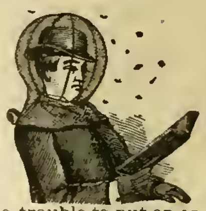
A. H. NEWMAN,
CHICAGO - - ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf J. VANDERVORT, Laceyville, Pa.

A NEW BEE-VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

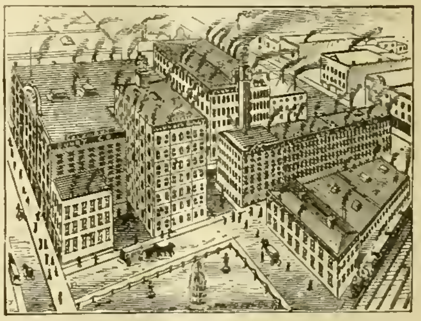
ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

IF YOU WANT
—A—
VEHICLE,
SEND A POSTAL CARD TO THE
COLUMBUS BUGGY CO.
COLUMBUS, OHIO,

When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

Buggies, Phaetons, Light Carriages, Surrey Wagons,



AND OUR POPULAR

American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

---

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL.

OLDEST BEE PAPER IN AMERICA

ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., September 17, 1884.

VOL. XX.—No. 38.

THE WEEKLY EDITION

OF

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, $2 a year; Monthly, $1.

PREMIUM.—Any one sending one *new* subscription for the Weekly, or two for the Monthly, for one year, besides their own subscription for a year for the Weekly, will be entitled to a copy of "Bees and Honey," bound in paper.

☞ The receipt for money sent us will be given on the address label on every paper. If not given in two weeks after sending the money, write us a Postal card, for something must be wrong about it.

☞ Any person sending a club of six, is entitled to an extra copy (like the club), sent to any address desired. Sample copies furnished *free*.

☞ Papers are stopped at the expiration of the time paid for, unless requested to be continued.

FOREIGN POSTAGE, EXTRA:

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To Australia—Weekly, $1; Monthly, 24 cents.

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ADVERTISING RATES.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 7 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

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☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

TRIAL SUBSCRIBERS.—The Weekly BEE JOURNAL will be sent to any address in North America from now until the end of 1884 for 30 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

☞ The Northwestern Bee-Keepers' Association will hold its fifth annual convention at Owsley's Hall, northwest corner of Robey and West Madison streets, Chicago, Ill., on Wednesday and Thursday, Oct. 15 and 16, 1884, commencing at 10 a. m. on Wednesday, and holding five sessions. Those who have attended one of these annual re-unions will need no urging to induce them to come again; those who have not, should remember that Father Langstroth characterized the last meeting as "representing the largest number of large, practical and successful honey-producers of any convention that he had ever visited." This meeting being held during the Inter-State Industrial Exposition, reduced railroad fares may be had on nearly all of the railroads. W. Z. HUTCHINSON, *Sec.*
C. C. MILLER, *Pres.*

☞ The Northern Indiana and Southern Michigan Bee-Keepers' Association will hold its next session in Goshen, Ind., on Oct. 3, 1884, at 10 a. m. Important topics relating to the management of the apiary will be discussed. Considerable time will be devoted to answering questions from the query-box. Several distinguished apiarists are expected to be present. All persons interested in bee-culture are invited to attend. A large meeting is anticipated.
F. L. PRETT, M. D., *Sec.*
A. BLUNT, *Pres.*

☞ The Wabash County Bee-Keepers' Association will hold its second meeting on Saturday, Oct. 4, at the Court House in Wabash, at 10 a. m. All bee-keepers are cordially invited to attend. Come one and all and bring your wife and children, and we will try and make it interesting for you. HENRY CRIPE, *Sec.*
AARON SINGER, *Pres.*

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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E. L. ARMSTRONG, Jerseyville, Ill.
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150 COMPLIMENTARY.

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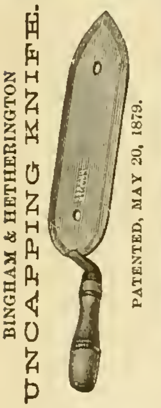
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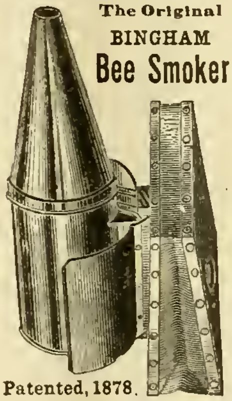

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Bingham & Hetherington Honey Knife, 2 inch..................................			1 15

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THOMAS G. NEWMAN,
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On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens — Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00—1,000 for $15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price 5c.

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject: suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price 5c.

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or $8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., SEPTEMBER 17, 1884. No. 38.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Call Things by their Right Names.

A correspondent seems to be "muddled" in consequence of his having produced "hybrids" by crossing bees from Palestine and Italy. He wrote to us to correct a former article and call his bees "*holy* Italians." We remarked, on page 571, that there were no such things as *holy* or *unholy* bees, and advised our correspondent to "call things by their proper names." Now he propounds to us the following questions:

Kane, Ill., Sept. 8, 1884.

I have been a pupil of the BEE JOURNAL for several years, and I thought that I was learning the bee-business right along, from its pages, but every pupil has his faults. I did not have the least idea of the using of any improper language in my letter on page 571. I am always ready to confess my errors, when I am convinced of committing any. I learned the words "Holy-Land queens" from the pages of the BEE JOURNAL. Now, I ask you to answer the following questions: I got a pure Italian queen from H. Alley, and a Holy-Land queen from I. R. Good; I reared queens from the Italian queen and bred those queens to drones reared from the Holy-Land queen. Now, what is the right name of those queens' offspring? I reared queens from the Holy-Land queen and I bred them to drones reared from the Italian queen. Now, what is the right name of those queens' offspring? If there is no such a bee as the Holy-Land bee, will you please make it plain, for I wish to "call things by their right names;" and I will likely, hereafter, be prepared to give the right names of my improved bees in future correspondence. We were blessed with a big rain fall on July 30. To-day the thoroughwort, Spanish-needle, goldenrod, smart-weed or heart's-ease, and ironwort are in a sea of bloom. The weather is very hot—94° in the shade to-day. My bees are making good use of each day, by gathering the honey which seems to be in abundance.

R. M. OSBORN.

In the above our correspondent calls the queen a Holy-Land queen. That is another thing from a *holy* queen. The land of Palestine has been called the "Holy Land" for ages, because of the fact that it was the land where the "holy one of Israel," the Messiah lived, taught, died, and rose again, and from which he ascended.

Things set apart for sacred uses were called "holy;" such as holy oil, holy vessels, holy temple, holy day, etc., but the bees never came under that classification—they were never called "holy bees."

It is true that honey was used in the vessels of the temple, that the Mosaic law regulated the ownership of bees, that "John the Baptist" ate "locusts and wild honey," but neither bees nor honey were ever mentioned among the sacred or holy things.

The proper names of the offspring of the queens mentioned by Mr. Osborn are *hybrids*; if it is wished to designate more particularly, it may be said that they are the "Osborn strain of bees," or that they are Syrio-Italians, or Italio-Syrians, whichever may preponderate in the "mixing" or hybridization. Instead of Holy-Land bees, call them Palestine bees.

The use of the word *holy* in such a connection savors of *cant* (though we do not think Mr. Osborn uses it in that way), and of trying to enhance business by the use of sacred terms, or a parading of religious sentiments in order to catch customers.

While we adore the "religion that is pure and undefiled," we detest the prostitution of it to the base use of helping to obtain "filthy lucre."

☞ In Texas Mr. Carroll neglected his corn crop to give the necessary attention to his bees, as they were of the most importance to him. During horse-mint bloom he offered $2.00 a day for help to run his extractors.

Sociability among Bee-Keepers.

One of our Exchanges makes the following suggestions on the above subject:

There is no question but that great benefits can be derived by any bee-keeper, and more particularly by the beginner, from attending the meetings of some or all of the various apicultural societies, that we are pleased to see are so rapidly forming through the various sections of our great country; but all cannot attend these meetings, and consequently are debarred from the benefits to be thus obtained. There is a way, however, by which great good can be accomplished in matters connected with bee-keeping, and the fraternity caused to become more firmly cemented by the bonds of friendship. This way is to make frequent exchange of visits, each with the other; consult personally (those who are neighbors) with each other in regard to any and all matters of interest. A few, living in one locality, can easily make a short visit to those some little distance from them, and pass a few pleasant hours from time to time, both in a business and social way. Try it. and see if you do not get some good, both as bee-keepers, and as social beings.

☞ Tanners are now using glucose instead of "oak" for oak-tanning leather. Speaking of this, the *Shoe and Leather Reporter* says: "Glucose is a fraud, however used. It is even a greater fraud when used on leather than used in adulterating syrup and sugar." It is a hard matter to think of any reasonable excuse for its existence or use! It seems to be good for nothing but adulterating.

☞ The "Autumn Leaves" which will bring the most returns are, no doubt, the Leaflets—"Why Eat Honey?" Scatter them and see the effect in selling honey in every neighborhood, at good prices. Two hundred will be sent postpaid for $1.00; 500 for $2.25; 1,000 for $4.00.

☞ The Chicago Re-union of Bee-Keepers promises to be well-attended this year, as usual. See the Notice on the front cover page.

Local Convention Directory.

1884. *Time and place of Meeting.*

Sept. 17.—Eastern Indiana. at Richmond. Ind.
M, G. Reynolds. Sec., Williamsburgh, Ind.

Sept. 17.—Eastern Indiana, at Richmond, Ind.
C. N. Blount, Sec.

Sept. 20.—Hancock County, O., at Findlay, O.
S. H. Bolton, Sec.

Sept. 23.—Southern Wisconsin, at Janesville, Wis.
C. O. Shannon, Sec.

Sept. 24-26.—Western, at Independence, Mo.
C. M. Crandall, Sec.

Oct. 1, 2.—Cedar Valley, Iowa, at Waterloo, Iowa.
H. O. McElhany; Sec.

Oct. 2.—Whitesides, Ill., at Morrison, Ill.
A. B. Kreider. Sec.

Oct. 2.—N. W. Ohio, at Defiance, Ohio.
W. H, Ralston, Sec.

Oct. 3.—N. Ind. and S. Mich. at Goshen, Ind.
F. L. Putt, M. D., Sec.

Oct. 4.—Progressive, at Bedford, O.
J. R. Reed, Sec.

Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec.

Oct. 4.—Wabash Co., at Wabash, Ind.
Henry Cripe, Sec.

Oct. 8.—Central Illinois, at Bloomington, Ill.
W. B. Lawrence, Sec.

Oct. 00, 00.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Oct, 22.—N. W. Ind., at Laporte, Ind.
A. Fahnestock, Sec.

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

Bee-Hive Swindlers.

Mr. F. L. Dougherty in the *Indiana Farmer* has this to say about the bee-hive swindlers now infesting the country :

The voice of the patent-hive vender is heard in the land, which causes a doleful cry from his victims. We made investigation, a few days since, of a plan by which one of these gentry proposed to prove the superiority of his hive over a Langstroth hive. He had transferred two colonies, one into each of the hives, placing the sections at once in both. From those on the Langstroth hive he had removed more than half of the strip of foundation which was placed in the sections for starting. In this hive also he had spread the brood in transferring until much of it had chilled and died, but in his own hive he had done a good job, and in the center row of sections, he had filled each section with comb from the old hive, placing a little patch of brood in four of the center sections, thus compelling the bees to enter the sections at once to protect the brood, and proving to his victim that the bees were working in the sections of his hive while those in the Langstroth hive were barely getting sufficient on which to subsist. He had instructed his patron not to disturb the bees on any account until nearly all of the sections were quite full of honey, and our friend was so strong in his faith that he was hardly willing that we should examine them. Fruit trees were just coming into bloom, but the bees had gathered no honey, to amount to anything, but by his manipulation were occupying the sections as a part of the brood-nest.

In the present age of easy enlightenment there is no excuse for any one to be gulled in this manner. While there is no way to prevent parties from traveling over the country plying their trade, they can compel no one to use their traps. So far as the comparative value of the hives is concerned, there is not one feature of importance known to the bee-keeping interest that cannot be applied to the Langstroth or American hives. The old patent, long expired, on these hives, covers all points of advantage, and they can be made and used with perfect freedom. Hence there is no necessity for paying for the right to do what you can do anyhow. We do not wish to be understood as opposed to any legitimate improvements, but we are opposed to having our friends abused in any such manner.

◆

Convention Notices.

☞ The date for holding the next meeting of the North American Bee-Keepers' Society, in the city of Rochester, N. Y., has been fixed for Oct. 28, 29 and 30, 1884. At the last meeting of the Northeastern Bee-Keepers' Association a committee was appointed to secure a Hall and make other necessary arrangements for this meeting. Knowing the men who compose this committee, we can assure all who are interested, that the matter is in good hands, and that everything will be arranged for one of the best meetings ever held by the Society. Rochester is one of the finest cities in the United States, and this should be an enjoyable meeting for all who are interested. We hope soon to announce a complete programme. C. C. Miller, *Sec.*
L. C. Root, *Vice-Pres.*

◆

☞ The Whiteside Bee-Keepers' Association will meet at Morrison, Ill., at 1 p. m., on Oct. 2, 1884. All bee-keepers are cordially invited.
A. B. Kreider, *Sec.*

◆

☞ The Bee-Keepers' Association of Eastern Indiana will meet in the rooms of the Y. M. C. A., at Richmond, Ind., on Sept. 17, 1884.
C. N. Blount, *Sec.*

◆

☞ The Progressive Bee-Keepers' Association meets on the first Saturday in October, 1884, at Bedford, O. A general invitation is given.
J. R. Reed, *Sec.*

◆

☞ The Southern Wisconsin Bee-Keepers' Association will hold its next meeting at the Court House in Janesville, Wis., on Sept. 23, 1884, at 10 a. m. Statistics will be taken. All bee-keepers are cordially invited to attend. J. T. Pomeroy, *Sec.*
C. O. Shannon, *Pres.*

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Sept. 15, 1884

The following are the latest quotations for honey and beeswax received up to this hour :

CINCINNATI.

HONEY—There is no change to note in the price of honey, but demand is improving gradually. Extracted brings 6@9c on arrival, and choice white comb honey in sections, 15@16c.

BEESWAX—Is dull at 26@28c on arrival.

C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations : Fancy white comb, 1-lb, 18@20c., 2-lb, 16@18c. ; fair to good, 1 and 2-lb. 14@16c.; fancy buckwheat, 1-lb, 12½@13c., 2-lb, 11¼@12c.; ordinary grades of dark, 1 and 2-lb, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY.—New honey is coming in, and selling at 16@18c. for best white 1 and 2-pound sections. New extacted, 8@9c. Honey in unglassed sections sells the most readily. Old comb honey all gone.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey sells slowly. Pries are about 14 to 16c. for very best in small frames. Receipts are not large of late. Extracted honey, quiet sales at 6 and 7c. Large offerings of California honey. Look for better demand for honey now that the weather is cooler.

BEESWAX.—For best yellow or prime, 30c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY.—Nearly 2,500 cases were received this week. Not for four years past has so large a quantity arrived in the city in the same short time. A large portion of it, however, was in transit. There is a limited demand at low figures. Market is weak at quotations. White to extra white comb, 9@11c.; dark to good, 7@9c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 25@30c.

Stearns & Smith. 423 Front Street.

ST. LOUIS.

HONEY — Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c; in a small way 17c is occasionally obtained, but 16c would be the more reliable quotation; 2-lbs., best white. 14@15c; second quality slow at 10@12c. Extracted slow at 8@9c.

BEESWAX—30c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY.—Demand and supply both good with prices rather in buyers' favor. Fancy white comb, ½-lb., 18c.; 1-lb., 16c.; 2-lb., 15c. California 2-lb. frames, 15c. Dark and lower grades, lower in proportion. Extracted, 6½ to 7½c.

BEESWAX.—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

☞ Having consolidated my business with the old and solid Commission House of Clemons, Cloon & Co. under the same firm name, we are better prepared than ever to handle honey in all shapes. We are in the market at all times for the purchase of honey in any shape or quantity, and will pay the highest market price, or will handle it on commission, as may be preferred. Ship 100 lbs. or so, enough to fairly represent what you have, and we will make prompt cash offer for the lot. We will also take special pains with orders from bee-men for any particular kind of honey which they may want to complete their orders when their own crops are exhausted, and will try at all times to faithfully represent their interests.

Jerome Twichell. 514 Walnut Street.

CORRESPONDENCE

For the American Bee Journal.

From Florida to Toronto, Can.

W. S. HART.

On Aug. 13, 1883, I started on my first trip outside of the State of Florida since I arrived in it from the West nearly nine years before. My objective points were Cincinnati, O., to make the personal acquaintance of Mr. Chas. F. Muth, to which I looked forward with anticipations of pleasure, as I had had dealings of the pleasantest kind with him during the past two years; then Louisville, Ky., where the great Southern Exposition and the Kentucky Bee-Keepers' Convention were to be held; after which the North American Bee-Keepers' Convention at Toronto, Can., and finally my old home and birth-place in N. H. were to have a fair share of my time.

After being delayed a couple of days by adverse winds, or no wind at all, a nice sailing breeze sprung up from the southeast and landed us in Savannah on Aug. 17. I took a good look about the city, and as I had a few barrels of honey along to dispose of, I tried the market, but found that there was no chance to sell so fine an article at a reasonable price, the trade being supplied with a very poor quality of dark honey bought at 60 or 70 cents per gallon. It would be an excellent place for an energetic man to build up a honey-trade, as a good quality of honey would be a revelation to the citizens.

I took the train for Atlanta on Aug. 20, arriving there a little after dark. Atlanta is a wide-awake, growing town. Evidently the Cotton Exposition has helped largely to give it a "boom." I tried the market for honey, and found it well supplied with honey of quite a dark color. I placed some of my light-colored mangrove honey here with a prospect of a fair demand in the future.

After looking over the city and its surroundings, and visiting the large cotton factory in the old Exposition building, I left for Chattanooga on Aug. 22, where I sold a couple of barrels of mangrove honey, which the dealers declared was far ahead of any thing that they had ever handled. I devoted the next two days to visiting the points of historic interest in and about the city. Prominent among these, stands old Lookout Mountain two miles away to the eastward. About two-thirds of the way up the mountain, I came to Mr. Thornburg's pleasant home surrounded with orchards of peach, pear, apple and cherry trees, many of which were still loaded with luscious fruit. Among the trees were the bee-hives composing his apiary, while his fine stock of poultry ranged "at their own sweet will" through the orchard, or half-buried in the rich earth among the raspberry bushes.

After making myself known, and accepting a hearty invitation to return to tea and stop over night, with my pockets and both hands loaded with peaches and apples, I continued my climb to the top of the mountain. The view from the "Look-out" is certainly a very fine one. Chattanooga and Mocason Bend lying directly in front, but far below, surrounded by ridges and cultivated fields where soldiers marched and counter-marched, fought, bled and died during the late war. From the top of the mountain can be seen parts of five States, when the air is clear. "Exquisite," the word used by George C. Connor in "Guide to Chattanooga," applies very well to the scene; but for rugged grandeur, there is nothing here to compare with many views among the White Mountains of New Hampshire.

Returning to Mr. Thornburg's I spent a pleasant evening sitting on the front porch talking "bees" while watching the changing lights of the little city far below, or following with my eyes the distant head-light of some locomotive whirling its load of living freight out of the city, and finally disappearing, apparently almost beneath our feet as it swings around between Macason Bend and the base of the mountain, a heavy rumbling sound still telling of its progress.

In the morning, after a hearty breakfast, and with a goodly supply of choice fruit for our refreshment on the way, the horse is hitched up, the wheels chained, and we, Mr. T., his father and myself, make our way down the mountain and back to Chattanooga.

On Aug. 25 I took the train for Cincinnati, and I rode nearly all day through a most interesting country, rugged and mountainous for many miles, making many tunnels and high bridges. The High Bridge of Kentucky standing 285 feet above the valley, being one of them. Then dropping down into as handsome a farming country as this continent can show, as we reach the fertile "blue grass section of old Kentucky."

I reached Cincinnati towards evening, and immediately started for Mr. Muth's. I found him making preparations for a trip to his farm, 100 miles from the city, but as his hospitable hand closes around mine, thoughts of all else but my best pleasure and entertainment seem to be put aside, and although I had intended to have left for Louisville the next morning, I found that it was out of the question to do so; as Mr. Muth and all his family seemed bent on giving me a good time, and an opportunity to see the interesting points of Cincinnati, I had to give myself up. I found quite a number of things that reminded me of my own home among the palmettoes and orange trees away down in Florida. Among these were the colonies of bees on the roof, the empty hives and other fixtures stowed away wherever a convenient nook could be found, and above all, the thousands of handsome packages of choice comb honey, and the great piles of bottles, jars, kegs, barrels and tanks of extracted honey stowed in the store, in the cellar, and under sheds. "How can he ever find a market for all this accumulated sweet?" was a question that arose in my mind. Long years of energetic labor has solved that question for him, and brought the constantly increasing supply and demand until now, hundreds of barrels of honey come in from all parts of this broad country, and are sold with but little more effort than it took to dispose of the first 400 pounds with which this great branch of trade was started in Cincinnati by Mr. Muth years ago.

Remembering that the Kentucky Bee-Keepers' Convention was to commence on Aug. 29, I reluctantly tore myself away from my hospitable friends and landed in Louisville in the evening of Aug. 28. I attended the Exposition the next morning, and was escorted to the honey exhibit by Mrs. Prof. Todd, who left me in the hands of the Kentucky bee-keepers. I found the honey exhibit a very fine and attractive one. The quality of nearly all the honey on exhibition being of the very best. Some placed there by Mr. Demaree, President of the Kentucky Bee-Keepers' Society, was a novelty, being of a very light color, and so thick and heavy in body as to have the appearance of being half-granulated. I found, however, upon testing it, that there were no other signs of granulation, but that it was as it had come from the red clover blossoms from which it was gathered. It took the first prize for extracted honey, as it well deserved. If red clover honey is all like this, we certainly have the strongest kind of an inducement to work for the development of the honey-bee to that point necessary to reach and gather it.

After examining the honey exhibit, and making the acquaintance of several pleasant gentlemen who had contributed to its success and beauty, I was invited to go with them to one of the rooms provided for such purposes, and take part in the Kentucky Bee-Keepers' Convention. As the proceedings of this convention have been published, I will not go over the ground again; but I want to say that if the bee-keepers only knew how much sociability and instruction there is in a bee-keepers' convention, I think there would be a much larger attendance. Every Kentucky bee-keeper who failed to put in an appearance at the convention lost an opportunity for great pleasure and profit.

I stopped in Louisville until Sept. 4, except that I took a flying trip to Mammoth Cave in the meantime, then returned to Cincinnati. The big Fair was just coming off, and Rex and his fantastic followers about to appear in the city, etc. Mr. Muth insisted that I ought not to lose all this, so I stopped until Sept. 7, visiting the Fair, seeing the procession, and taking in as much of the fun and good things of the city as possible in so short a time, to compensate me for the nine long years of steady labor where the sports of forest and stream were almost the only ones at my disposal.

My visit to the Fair was rather early, and before the exhibits were nearly all in place, but at that time the number of exhibits was very large, and gave promise of the Fair as being a grand success. Of all the individual exhibits there, none surpassed, in my estimation, the grand show of honey and apiarian devices made by Mr. Muth.

Leaving Cincinnati I made a short stop at Dayton, Ohio, to visit the Soldiers' Home, and found that to see it was well worth a little trouble and expense. Sept. 10 found me in Toledo, and the next four days I spent at the Tri-State Fair and attending the bee-keepers' convention. Here also I made many very pleasant acquaintances, and enjoyed the companionship of many I have long known by reputation as the "big guns" of apiculture; and here again I met Mr. Muth, eager to catch any new points in his line, and ready to give the results of his large experience in return. The honey exhibit was quite a good and attractive one. The exhibit of apiarian implements was better than any I had yet seen. Noticeable as a part of the apiarian exhibit was a collection of pressed honey-producing flowers and plants nicely mounted and well displayed. Here again I met Mr. W. C. Pelham, who had his foundation machine on exhibition. Having met him at Louisville, we felt like old acquaintances, and so we decided to go on to Toronto in each others company.

On Saturday, Sept. 15, we started for Toronto via Detroit, Mich., regretting that more of our new acquaintances could not accompany us there. Having a little time to spare while in Detroit, Mr. Pelham and myself made the best of it by a visit to the cupola of the City Hall building, where we had a fine view of the city, and could plainly see the peculiar plan of its streets, the principal ones radiating from the spot where we stood, like the spokes of a wheel, and similar to the plan of those of Washington, D. C., as viewed from the dome of the Capitol.

Again entering the cars, they were loaded on boats and ferried to the Canadian side. Arriving at Toronto in the evening, we soon found quarters at a hotel. After securing our mail, Monday was spent in attending the Fair. I will give the Province the credit of having the best arranged and most complete buildings and grounds, and the best exhibit of agricultural products that I have ever seen. The live-stock exhibit was particularly large, and every animal a beauty of its kind. The show of manufactured articles was also very fine, but what particularly took the eye and gratified the heart of every bee-keeper, was the handsome and commodious building standing close to one of the main entrances, with "Honey Department" in large letters over its entrance. Stepping inside we saw the jolly face of the President of the North American Bee-Keepers' Society, Mr. D. A. Jones framed very appropriately with handsomely laqelled cans of extracted honey, and still handsomer sections of comb honey, the whole making a very nice picture.

After making ourselves known we took a look about us, and for the first time saw a honey exhibit that at all approaches our idea of what one should be. There were tons and tons of honey in every shape and style of package that is popular in the market, from the cute little 5-cent cans (which, by the way, not only bring good prices for the honey in them, but are also one of the best advertisements that could be desired), to barrels holding 40 gallons or more, and from half-pound sections, setting about singly as a part of the ornamentation, to great stacks of crated sections of large size and without an open cell in them, even next the wood. I cannot here go into the details of the exhibit of honey and apiarian supplies, but before leaving the subject let me say that the apiarists who made up that display deserve the great success they are having. They take the proper means of enlightening the masses in regard to their sweet product, and the hundreds of dollars that poured into the coffers of Mr. Jones each day of the Fair, shows that their efforts are appreciated. Canada has beaten us "way out of sight" in her honey-exhibits, and has found a large profit in doing so. Shall we let the matter rest thus? or shall we take advantage of the great New Orleans Exposition to retrieve our honors, make the largest and finest show of honey that was ever gotten together, and give the honey market a boom that shall have a permanent effect on the demand and prices? We can do it if we will, notwithstanding we will have to winter the honey before the time to make the exhibit.

On Sept. 18 the North American Bee-Keepers' Convention met in the Council Chamber, where a large number were assembled. Here also I saw many new faces, which, when I heard their names, were recognized instantly as belonging to my long list of desired acquaintances; but chief among them all was the "Father of modern bee-culture," as he is often called, the Rev. L. L. Langstroth. I first met him at the Fair Grounds on the the morning of the 19th (the convention being there in a body to examine the apiarian exhibit), and I was highly gratified to hear him say as he grasped my hand in friendly greeting, "Mr. Hart, I was greatly interested in that Florida palmetto honey. It cannot be excelled."

At 1 p. m. the convention re-assembled at the Council Chamber, and our reverend friend was escorted to the chair of honor. A large, well-built, dignified man whose honored grey locks resting about a smooth-shaven face of a peculiarly genial and kindly expression, he looked the "Father," and one whom we, his children, were proud to honor. At each session of the convention the number attending augmented. The interest of the meeting was largely increased by the presence of many of the members of the Ontario and the Northeastern associations. I was particularly struck with the cordiality of the people of the Provinces toward those attending the convention from this side of "the line." Addresses of welcome and a careful attention to our welfare, both in and out of the convention, added much to our pleasure. In fact, every thing conspired to make the meeting pleasant and enjoyable, and nothing occurred to mar the pleasure of it.

Soon after noon I bade "good-by" to the last assemblage of bee-keepers that I expected to meet on my trip, and hurried away to catch the train for Kingston, there to take a steamer down the St. Lawrence, through the Thousand Islands and the Rapids to Montreal. From there I visited the White Mountains and my old home in New Hampshire. Over two happy weeks were spent rambling over those old hills where every stone and tree was an old acquaintance, meeting old friends and school-mates, and hearing of the prosperity and misfortunes of the many who like myself had left the old home and "struck out in the world." But others that I had last seen 12 years before, taking their part in the busy life of the town, were now laid to rest in the quiet country churchyard, and there among the graves made during my absence was one marked with a white stone, on which was inscribed my father's name. The old home is not what is used to be. Mother is there still, and there is much that is cheerful, but the vacant chair causes a feeling of loneliness that makes the evening meal a quiet one.

On my way South I visited Boston, New York, Philadelphia, Washington, and all the larger cities of the East. Arriving at Augusta, Ga., I fulfilled my promise made at Toronto, of calling on Dr. J. P. H. Brown, and a truly enjoyable visit I had. After being shown through his fine apiary, viewing the city and suburbs, and partaking of the many good things at their table, presided over by Mrs. Brown, I was once more seated in the cars, and by land and water reached home on Nov. 26, just in time to escape a storm that was coming on as we crossed Mosquito Barr at sundown.

Now, after the excitement of my trip is over, I look back upon it with more than ordinary pleasure to feel that I have been the recipient of so much kindness from so many, and that I am in the future to count them among my friends.

New Smyrna, Fla.

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☞ The bee-keepers' association of Central Illinois will hold their quarterly meeting at Bloomington, Ill., on Wednesday, Oct. 8, 1884, at 10 a. m.

W. B. Lawrence, *Sec.*

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☞ The Western Bee-Keepers' Association will hold its second annual meeting in Independence, Mo., Wednesday, Thursday and Friday, Sept. 24—26, 1884. The Association will endeavor to make this the most instructive and interesting meeting it has yet held, and will spare no pains within its means to make it in every sense valuable to all.

C. M. Crandall, *Sec.*

For the American Bee Journal.

Swarming, Hibernation, etc.

ABEL GRESH.

As a beginner in improved methods of bee-keeping. I frequently find difficulty in harmonizing the teachings of old bee-masters with *my* experiences. First, I would refer to W. Z. Hutchinson's article on page 551. He says, "Let the bees swarm—just once." All of mine swarmed in June, and by applying the Heddon-plan, and cutting out all the cells but one—the best in appearance—all went well until the beginning of a flow of honey from buckwheat in September, when they all took another turn, and one colony cast an after-swarm which I returned. Can Mr. Hutchinson, by any method, control this swarming in the fall? Or, can he delay it in the spring so that the two seasons will come near enough together to have it suffice the bees to swarm but once? This excessive increase is likely to become a nuisance to a bee-keeper who desires to keep only a moderate number of bees in a locality where sales of full colonies is limited.

I commenced in the spring of 1883 with 2 colonies; the spring of 1884 with 6, and now I possess 22, after returning 2 swarms for want of sufficient hives. In the course of 3 or 4 years I would scarcely know what to do with them at this rate of increase, even though I sold all for which I could find market. Prof. Cook's Manual gives methods employed by different successful apiarists, to control this increase, but I fail to find any advocates of the methods there given, amongst the best writers in the BEE JOURNAL. I would like very much to read discussions of this subject, by the advocates of "Let your bees swarm—just once," and those who advocate "hiving back," so that we beginners could form our own conclusions as to the merits of each way of producing surplus honey, which I consider the sole aim of nine-tenths of all bee-keepers.

As to the hibernation theory: I do not believe that hibernation is indispensable to the safe wintering of bees. A friend of mine had a colony of bees packed very warmly in timothy chaff, last winter, and though the mercury here was 30° below zero, he tells me that he could hear the hum of that colony every time he went to the hive; they ate through the cloths and let the chaff into the brood-chamber, and acted in general as if impatient for the appearance of spring; and that colony has been amongst his best all summer. We have also quite recently had frequent reports of successful wintering in high temperatures, and Mr. Doolittle's is the only report adverse to it. I believe, though, that hibernation is the natural state in which bees can successfully pass through considerable severity of cold.

The "pollen theory" rather puzzles me. I have been taught, all my life, that the instincts of the lower creations are God-given and correct, as is proven in almost every instance; man, alone, being dependent upon his reasoning powers; and that nature has, in the instinct of the bee, led it into such a grievous error, practiced by it in all times past, as to lay up stores for its winter supply, which, if it eats, will bring on disease and death. I, for one, must be excused from believing until further *positive* evidence is produced. If an individual's stomach is irritated or inflamed, many undigested particles might appear in his excrement; and what would be thought of the practitioner who would at once pronounce the undigested food as the cause of the trouble, and advocate the entire exclusion of such food from our tables? And because, where such food was excluded, persons remained well, is no argument that the portion excluded was not fit to eat, as evidenced for instance in the case of vegetarians. Sick people often partake of food which injures them, and so may sick bees; but I would as soon exclude bread from the tables of healthy people, as "bee-bread" from healthy bees.

Weedville, Pa.

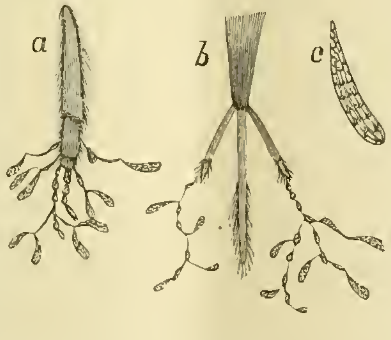
For the American Bee Journal.

Milkweed Pollen.

CLARENCE M. WEED.

In the BEE JOURNAL of July 30, Mr. W. W. Trussel describes some bees having, what he supposed, diseased feet, which are said by Prof. Cook to be the pollen-masses of milkweed (*Asclepias*). This is one of the most common of bee-ailments at this season of the year, especially in regions where milkweed abounds.

These pollen-masses are very peculiar in structure. They consist of several filaments branching off from each other in such a way that the legs and mouth-parts of bees and other insects can easily become entangled in them. In the figure *a*, a part of a bee's leg is shown with these pollen-masses attached. In figure *b*, the mouth-parts are shown similarly encumbered; and in figure c, one of the pollen-masses is shown much magnified.



a.—Leg, with Pollen-Masses Attached.
b.—Mouth-Parts, with Pollen-Masses Attached.
c.—Pollen-Grain much Magnified.

The extent to which milkweeds are injurious in thus loading their visitors' feet, is an open question. In many cases I have seen five or six bees attached to the blossom-heads of a single plant. Prof. Cook believes that the injury is not very great. Along the river-banks, near the College apiary, there are great numbers of milkweeds in blossom, from which the bees gather much honey without serious diminution in numbers.

Michigan Agricultural College.

For the American Bee Journal.

Pollen Logic.

WM. F. CLARKE.

Before that "buzzing about hibernation" fills my ears, which Mr. Heddon predicts will deprive me of time to "apply any literary vigor to the pollen question," I want to point out some defects in my friend's logic in support of his theory. And, let me say at the outset, that so far as I can judge, I do think the theory is honestly his. I wish to place honor or dishonor where it justly belongs, and if the pollen theory should ever come to be an established part of apicultural science, I think the discoverer's laurels will fairly belong to Mr. Heddon; but I am not ready yet to entwine and present a wreath. He will have to fight more gladiatorial battles in the arena of argument, before I consent to crown him as victor.

The whole of Mr. Heddon's long article in the BEE JOURNAL of Aug. 6, tempts criticism; but I suppose I have really no right to meddle with any parts of it except those in which he pays his respects to me. Courtesy seems to require that I should leave the other writers named to reply for themselves. When they as well as he have "said their say," I and others may express our opinions on the merits of the discussion.

The first point that properly belongs to me, is the natural silliness of bees, and all I will say in reference to it at this time is, that Mr. Heddon's logic is at fault. He begs the question by affirming that the intelligence of man is needed to protect bees against a choice of bee-bread in preference to honey as a winter diet. For, 1. It is not claimed that bees prefer bee-bread to honey as a winter diet, but that their instinct is a sufficient guide when to take pollen in *addition* to their staple diet, honey, and when to let it alone. 2. Mr. Heddon asserts that bees are "silly" enough to prefer bee-bread to honey, which is the very thing to be proved. 3. His own report shows that it is not necessary to exclude pollen from a hive in order that bees may winter well. A large proportion of his colonies which wintered well had access to bee-bread.

Mr. Heddon cites the following assertion as one which he is "not prepared to accept or reject" for want of evidence. It is this: That bees can and do eat pollen all winter long and yet winter well. Not prepared to accept or reject this statement? Why, his whole pollen theory is a point blank rejection of it. He further says, "If pollen husks (whatever they may be) are found in the intestines of bees that have wintered well," as if there were doubt of it. Let him turn to Vol. I of the BEE JOURNAL, page 253, and he will find Donhoff's analysis of the excreta of bees, the closing sentence of which states that "according to an approximative estimate, the excreta of bees consist of about one-third uric and hippuric acid, and *the residue of indigestible portions of pollen.*" The plain inference from this, is that pollen forms part of the natural food of bees. But this proved, Mr. Heddon says, "I should next want to get to an agreement as to what condition is meant by "well." Bees may be wintered safely; *i. e.*, so as to save the individuality of the colony, and not be wintered as "well" as I wish, and as I wintered the 45 colonies referred to in my report." Mr. Heddon's report left the impression that among the 291 colonies that were not deprived of pollen, many wintered "well," as "well" as the 44 that had no pollen. In my review of his report, I asked, "Did others that had *some* pollen winter equally well with the 44 that had none?" This question is not squarely met by Mr. H., although he says, it seems to him it was answered before I asked it. It seems to *me* it is not answered yet. He says, "We told you that the workers of every diseased colony, which we examined, except the 45 in question, had distended bodies; while those of the 44 gave no appearance of such distention." "Undiseased," mark, yet they "had distended bodies!" Can this mean any more than that they were not so slim as "those of the 44?" "Those of the 44" had more highly-concentrated food than the others." They were like highly-grained horses, while the others were like horses that had less grain and more hay. This looks very much as if it were an advantage rather than otherwise to have some pollen in the hives, for the bees were "undiseased," and in fuller flesh, or, as we are wont to say, "in better condition" than "those of the 44."

I fail to see with what propriety Mr. Heddon calls my criticism on "the comb-full of bee-bread" a "catch-quibble." According to his report, there was nearly if not quite as much bee-bread in that hive in the spring as in the fall. Many other colonies beside this No. 45 had as much pollen as it had, yet they came through "undiseased." If No. 45 consumed so little pollen, less, or at any rate, not more than many other colonies that wintered without disease, is it not reasonable to suppose that some other cause than the presence of pollen in the hive was at the bottom of the trouble? I think so. Mr. Heddon himself all but suggests another explanation, when, after speaking of the strangeness of this one case out of 45 sugar-fed colonies (and, I admit the strangeness), he thinks there might have been no trouble, but that "the late brood threw the cluster upon this comb." Being there, they were so "silly" as to eat pollen, would, I suppose be his conclusion. But may not some other circumstance connected with "the late brood" account for this colony going wrong? As there was young brood in that hive when it was put into winter quarters, it is probable it had a large proportion of young bees in it.

I think our most experienced bee-keepers have become chary of stimulating breeding late in the fall, and will not differ much in the opinion that old bees winter better than young ones. It may be that young bees are more liable to restlessness than old ones, and do not so readily calm down into that state of quiescence which is most favorable to wintering "well." This brings me around to my theory of hibernation, on which I will only say now, that if bees are restless when in confinement, whether cold or heat causes the restlessness, they will eat voraciously; their instinctive aversion to befouling the hive will cause them to retain their fæces; and they will have the diarrhœa. It is a condition of things which impels them to take so much food that they must have a cleansing flight or become diseased, and not the particular kind of food they eat that causes the trouble. Fix them so they can hibernate, and pollen or no pollen, they will winter all right.

Speedside, Ont.

For the American Bee Journal.

Does it Pay to Use Foundation?

U. E. DODGE.

There are problems to solve which constantly arise in apiculture, as well as in almost all other branches of human industry, which at times puzzles the most observing. Whether the bee-keeper can or cannot produce natural combs as cheaply or cheaper than he can produce foundation, has been a query with me for several years; and the last two years of close observation and careful experiment, has confirmed me in the opinion that money paid for foundation for use in the brood-frames, is virtually money thrown away; that bees during a good honey-flow produce and use as much wax with foundation as without it, and that it does not aid in the rapid storage of surplus, or add anything to the wintering qualities.

Now for my reasons: The season of 1883, at the commencement of the swarming season, found me with 300 good, wired frames nicely filled with full sheets of Dunham foundation, with the expectation of preparing enough more to supply all my swarms with ten full sheets in the brood-chamber; but it being an almost unprecedented season for swarming, my bees got the start of me, and the result was that all of my first swarms were hived on ten full sheets of foundation, while the second and late swarms were hived on empty frames, right the reverse from what it should be, as I supposed. Let us not draw too hasty conclusions, but patiently wait and note the condition of those late and empty-frame colonies in the fall, and their condition in the spring of 1884. I quietly submitted to the disappointment and loss, as I deemed it, and let nature take its course.

Late in November, when an examination of the colonies having it their own way was made, revealed the startling discovery that no hive was more than ⅔, and many not over ½ full of comb, but white and nice and well filled with honey and covered with bees.

But here another problem arises concerning the empty space below the combs of those which were partly filled with frames. What should I do? Should I add full frames of sealed honey and pack them on the summer stands? or should I put them into the bee-cellar, which is much less work, and take the chances of having many dead bees and empty combs to carry out in the spring? Should I double them up or let them severely alone, to be governed by that great fundamental law, "The survival of the fittest?" I finally decided on the latter, and put them into the cellar, and piled them as closely together as hives could be, the lower ones being flat on the cellar bottom, and five in a tier, one above another.

They remained in this condition until April 19 without disturbance. On that date I nervously peered into the gloom, and sounds of insect life greeted my ears; courage and hope prompted a hasty examination. No. 1 responded promptly; No. 2 greeted my ear with that welcome sound of life; and so on through the entire number, all responding in lively tones; and an examination showed that they were bright and clean, with no dead bees or waste accumulations upon the bottom-boards, while those colonies with full sheets of foundation showed accumulations of waste and moisture.

Why this difference? Was it because the bees upon full sheets of foundation had a larger surface to cover and dissipate the moisture? or did the open space below the combs in the partly-filled hives allow room for a more free circulation of air? If this be the true solution of the cause, then reason suggests the idea that if we place a false-bottom or hoop some 2 or 3 inches wide below the combs of full colonies, we should produce the same results. But this is not what I am attempting to prove; it is whether I should have made anything, financially, by supplying each of those late swarms with foundation. They are to-day as good colonies and in as good condition, and have given me as good an average of surplus honey as have the colonies which were supplied with ten full sheets of foundation last year. These being the actual facts, I fail to see where I got my money back for foundation supplied to the early swarms of last year.

"But," says one, "you get all straight combs." True; I acknowledge that fact, but I do not consider it true economy to pay from $1.00 to $1.50 per colony for straight combs, when I can accomplish that object with less labor and expense than it takes to wire the frames and put in the foundation. I am a stickler for straight combs, and if there is any annoyance in bee-keeping which excels in anger-provoking qualities, it is crooked combs.

This season's experience has convinced me that straight, natural combs are obtained like many other things in bee-keeping, by attention at the right time and in the right manner. I am an advocate for improvements, and search with eagerness for any thing that tends to the advancement and benefit of apiculture, and I test all the claimed improvements according to my best ability, and consider many of them great acquisitions to the comfort and prosperity of the bees, and the pleasure of their owners.

But the question on which I started out, is purely a financial one, a matter of profit and loss. I need not multiply words. I cannot clearly see that the balance is entirely on the credit side of the account, and if I cannot be assured that there is a gain by the use of foundation either in comfort and convenience, or in dollars and cents, then I propose to discard it, for I have never known any one to acquire any great amount of gain by merely "swapping pennies." Perhaps locations so widely differ that "what is one man's meat may be another man's poison." I hope to hear, through the columns of the Bee Journal, from other localities and other experiences in this matter.

Fredonia, N. Y.

Rural New Yorker.

Careful Breeding of Bees.

PROF. A. J. COOK.

Of late there is no subject connected with bee-keeping that has attracted more attention from our best writers and most successful workers in this field, than that of breeding. We all desire the bee that will give us the greatest returns in honey, and we wish to couple with this, amiability, and if possible, beauty. The questions desirable to consider are: can our bees be improved? and how can it be done?

That our bees of all races vary in quality, no observing bee-keeper will doubt. The law of variation, then, holds among bees as well as among all higher animals. Every experienced bee-keeper is equally certain that the law of inheritance is no less potent among bees than among horses and cattle. If we breed from the queen of a colony which is cross, we are very likely to secure bees that are irritable as a result. That all our best bee-keepers select their best colonies for breeding, is full proof that this law is well understood.

These two laws once granted, it becomes at once evident that we have not attained perfection as yet, nor can we ever reach the best. Here, as everywhere, God proclaims that honest effort shall not go unrewarded.

The next inquiry is, how can we best reach toward perfection? Here, as in all breeding, we must select animals which possess desirable characteristics, and by wise mating and closest—severest—selection, we may reach most rapidly toward the ideal bee. Thus far, I think there is no discord of sentiment among our best and most successful bee-keepers; but at this point there comes in a wide divergence of opinion. Some—probably the majority—claim that we should select the best race, all points considered, as the Italian, the Syrian, etc., for our foundation, and then breed wholly within this line—just as our breeders of horses and cattle claim that in breeding, crossing is never desirable. They claim, and correctly, I think, that each breed has its peculiar and distinctive excellence, and that to cross or mate animals of different breeds, failing to improve, introduces the element of uncertainty, and tends to confusion.

Other bee-keepers—and these are men whose opinions are too valuable to push rudely aside—claim that in our foundation we should select two, three, or even all the races, so that we may secure the valuable points of all, and then, by skillful selection long practiced, weed out the undesirable, and retain all that is best.

Is this position tenable? and, if so, how is it to be explained that the same is not true in the breeding of higher animals? Modern biology shows conclusively that all animals are much the same in their development, and that laws which hold in one case, are almost sure to be true in all. In case of horses and cattle, each breed has its separate purpose. The Shorthorn is for beef; the Ayrshire for milk; the Jersey for cream and butter. No breed can be excellent in all these directions. It is enough that an animal gives very rich milk, without giving a very large quantity. Beef and milk qualities of the highest excellence cannot co-exist in the same animal. So, too, the draft horse and the roadster are wide apart in their form and habits, as also in the kind of work which each is expected to perform.

With our bees, however, this is not so. What we all desire is the bee that will gather the most honey, take the seasons as they go. If the German bees have some points of superiority, if they go into the comb-honey receptacles most readily, and give us the whitest honey, then they may well be used in the foundation, which is to result in the best improvement. If the Italians are the quickest, the most amiable, and the quietest while being handled, then they may well be used to give their desirable characteristics in securing the best bee. If the Syrians are the most rapid breeders, the best to build queen-cells, and have longer tongues than other bees, then they should not be left out. Surely there is no such reason to avoid crossing in breeding bees for excellence, as we believe exists with cattle and horses. In case of hogs, the Poland-China ranks very high, if not first, and it was originated in just this way, if we are rightly informed. Hogs are reared for one purpose, and so the crossing of several breeds, each possessing real excellence, might result, after years of careful selection, in a breed superior to any of the foundation breeds. The same is true, I think, of bees.

If any race of bees, then, has superior excellence, it may well be selected in breeding for the future. Some bee-keepers think that they have secured a superior race by crossing the blacks and Italians, and they have persuaded others of the truth of this opinion. This only shows that practice and true theory walk hand in hand. It seems to me that a judicious combination of the Carniolan bee—a variety of the German race—the Italian race and the Syrians, followed by long, close, careful selection, promises well to give us the "Poland-China" among bees.

That crossing adds vigor, is well known. One of our best breeders of cattle says that he prefers a high grade, for feeding, to a pure-bred animal. All bee-keepers know with what vigor the first cross between German and Italian bees work. This again, is a reason for combining different races.

The conclusion is, then, that in breeding bees, there is no natural law in the way of securing the greatest improvement through a judicious crossing, followed by careful selection.

Lansing, Mich.

For the American Bee Journal.

Is it Bee-Diarrhœa?

W. M. WOODWARD.

On page 556 Mr. S. J. Youngman springs a new topic for the readers of the Bee Journal, which is, I think, worthy of further notice. After losing 7 colonies by disease, last winter, I became deeply interested in the study of "bee-diarrhœa," and have been on the watch for every hint that might even lead to light upon it. As some of my observations are complementary to the incident Mr. Y. there describes, I wish to place them before the readers of the Bee Journal, hoping that other observations may be called out. This matter of the true nature of healthy bee-excrement, lies at the bottom of any proper understanding of the condition in disease.

From early spring, I carefully watch for the droppings of the bees, and the condition they were in, and have often seen full drops fall, and at the same time made as close examination as I could with the naked eye; and as a result, I have uniformly found it liquid, sometimes so clear as to scarcely leave a stain on paper, but at other times more or less thickened with pollen or other grains, even during the best honey-flow from white clover. After the above observations I should have much enjoyed that scene with Mr. Y., and should have expected to find the drops increased both in frequency and size as we approached the apiary; as I had before observed them pass it in the air, first a larger then a smaller, and then a still smaller drop, the three being distinctly visible. This I have observed only very occasionally when it occurred while circling upward from the hive.

I have also watched bees, in the agony of death, crawl out of the hive and try to fly, and being unable to do so, to fall and strain themselves in order to pass the feces, which was then so thick and stiff as to hang together like a rope, and hold its shape and dry so; but the poor suffering bee only strained itself to death. In no case have I ever been able to detect anything like dry powder save as the excrement became decomposed.

The conclusion I have arrived at is this: 1. That healthy bee-excrement is always liquid, or liquid more or less thickened with the refuse of pollen, etc. 2. That it is frequently occurring during flight; and with large numbers of bees, might be observed at almost any time on a large scale, as by Mr. Youngman.

If this is true, it has some important bearings: 1. On the disease called "diarrhœa." How can a thickening of the feces, as in the state of disease, by any right use of terms, be called "diarrhœa," which means to flow, and is used to describe an unusual and unhealthy condition. 2. It is my belief that "dry feces" is an impossibility with a live bee; but if it is possible, it is certainly not natural. If dry powder is observed, some other explanation must be sought for its existence; and until none can be found, or healthy bees are seen to pass it, I will not believe it. 3. If this is a true description, it affords a firm basis for the "pollen theory," the disease not consisting of a thinning of the feces as implied by the term "diarrhœa," but a thickening of the same, until it becomes impassable.

Will Mr. Heddon tell us the condition of those bees that died in three weeks in the cellar? Were they quiet at all? How often were they examined at the first? And what, if anything, was done to quiet them?

Custer, Ill.

For the American Bee Journal.

Iowa State Convention.

The display of honey-bees and apiarian implements of the Iowa State Bee-Keepers' Association, at the Iowa State Fair, was excellent. Though the number of exhibitors was not large, the display was very creditable to the Society. Among the most important of the exhibitors were the following: In extracted honey and bees, Rev. O. Clute, of Iowa City, certainly took the lead, he having a very large and excellent display of extracted honey in glasses of all sizes.

Messrs. Simons & Humphery took the lead on comb honey, having a large display of both fall and spring honey.

Mr. Kimball, of DeWitt, Iowa, also had an excellent display of bees and honey; his display of bees being equaled only by that of Mr. Clute.

In the display of apiarian implements and hives, Mr. Sorrick took the lead. There were a number of other good displays, among them that of Mr. Norris, of Cedar Falls.

The Society held its second annual meeting on the Fair Grounds, Wednesday evening at 5 o'clock, President O. Clute in the chair.

In the absence of the Secretary, L. E. Cardell, Mr. T. W. Livingston was elected Secretary *pro tem.* The President then gave his report, which was approved. The Treasurer, Mr. Sorrick, then gave his report, which was approved. Secretary Livingston then read the minutes of the previous meeting, which were approved and adopted.

The following officers were then elected for the coming year: President, Rev. O. Clute, Iowa City; Vice President, O. O. Poppleton, Williamstown; Secretary, Wm. Goos, Davenport; Treasurer, Fred. M. Sorrick, Des Moines.

On motion it was decided that the dues of L. E. Cardell be remitted, being in consideration of the expenses met by him for postage, etc.

There was quite a lively discussion in regard to holding a winter meeting as well as the annual Fair meeting, some thinking it best and others not. It was finally suggested that it be left to the executive committee to decide. Mr. Clute then said that we could get a tent for about $50 in which to hold our annual Fair meeting.

A motion that the executive committee be instructed to get a tent, was carried. After some discussion in regard to the programme to be carried out for the evening, it was decided to have a question-box; the questions to be answered by any of the members present. A motion to leave the making of the programme for the coming year, to the executive committe, was carried. On motion the meeting then adjourned till 7 p. m.

The evening meeting was called to order by President Clute at 7 o'clock. The programme for the evening being carried out, in which the members took a lively part, on motion, the meeting then adjourned.

Wm. Goos, *Sec.*

Texas Farm and Ranch.

Organization for Bee-Keepers.

R. J. KENDALL.

Probably one of the greatest causes of the spread of apiculture throughout the entire country during recent years, is the growing practice of holding conventions and meetings of apiarists. These meetings, either county, State, district or national, are of the utmost importance, and the more nearly they become perfect in organization, full in membership, and regular in attendance, the more useful they will be.

The average bee-keeper has not the money to spend in making long trips to a quarterly meeting, and the same reason seems to operate against his attendance at an annual meeting. The question is, how shall we obviate the difficulty? In my poor opinion it is to be overcome in only one way—by county organizations. If we were to zealously go in for these, and every member faithfully attend each monthly meeting, we would help ourselves amazingly, not only in mutual instruction as to our apiaries and their care, but also in that equally important branch of our business—the sale of our honey and the prices we should get for it. I believe that there is scarcely a county or district but what could be educated to use more honey than could be produced, so to speak.

What we want is system and organization. Instead of each one of us going on his "own hook" and separately and individually soliciting store-keepers for orders, this should be done by an agent, or by circular, from the county society. If this method were practiced, the store-keeper would not be able to play one bee-keeper off against another in the way he does now. We should have a market price, and that price the store-keeper would have to pay, or go without his honey. Some reader may think that if this course were adopted, much of the honey would remain unsold. I do not think so. As soon as people found that there was honey—good, pure honey—in the markets, they would have it, and would gladly pay 15 cents per pound for it, right along. We can produce honey to retail at that figure and do well; but when we go to a dealer and ask him a certain figure, he replies as promptly as if he had learned his answers: "Oh, I can buy it at so and so." In this way he creates a doubt in the mind of the seller, that other honey-producers are offering their honey at less than he does, and he puts down his own price, believing that the store-keeper told him the truth, which he may or may not have done, just according to his belief in the adage that "honesty is the best policy."

If honey-producers were organized, agreed on their prices at each monthly meeting, and had a central depot in each town from which could be sold to retailers, all this beating down could be checked and stopped. Have my readers never heard that there are such things in the cities as "trades unions," and that "in union there is strength?" If they have, do they imagine that the same principle would not work equally as well to their advantage as to other businesses? If they do, they are missing a splendid means of self-help, and losing money every season because of it.

Austin, Texas.

For the American Bee Journal.

Northwestern Ohio Convention.

According to the announcements, the bee-keepers of Defiance and adjoining counties met, and Mr. O. Welch was called to the chair. After some preliminary remarks, the chairman appointed Messrs. W. V. Thomas, Wm. H. Ralston, and I. T. Parker a committee to draft a constitution; this they did, and reported one, which, after some slight changes, was adopted; thereby naming this association "The Northwestern Ohio Bee-Keepers' Association."

The permanent organization was then formed by the election of Mr. Lake E. Myers, President; Mr. O.

Welch, Vice-President; Dr. Wm. H. Ralston, Secretary; and Rev. W. V. Thomas, Treasurer. Sixteen paid into the treasury, 50 cents each, and became members by signing the constitution. The next meeting will be at the office of the Secretary of the Defiance County Agricultural Society, on the Fair Grounds, at 3 p. m. sharp, on Oct. 2, 1884.

Wm. H. Ralston, *Sec.*
L. E. Myers, *Pres.*

For the American Bee Journal.

Northwestern Indiana Convention.

The bee-keepers of La Porte and adjoining counties met in the city of La Porte on Thursday, Sept. 4, 1884, at Lay's Opera House at 2 p. m., to organize a permanent bee-keepers' society. A. Fahnestock was elected Chairman, and Oscar J. Parkell Secretary.

After a few preliminary remarks by the chairman, as to the objects to be accomplished in thus forming a society for the advancement of the interests in bee-keeping, he informed them that it would now be in order to appoint a committee to draft a constitution and by-laws, and appointed W. Banks, O. J. Parkell, G. R. Tyrrell and D. Furness as such committee, who, in due time, reported a constitution and by-laws, which were unanimously adopted.

It was resolved that our annual meeting should be held on Oct. 22, 1884, at 2 p. m. at Lay's Opera House, in the city of La Porte; and that this organization shall be known as the Northwestern Indiana Bee-Keepers' Society, and that the membership fee shall be one dollar annually. The Secretary then enrolled 22 names, and received $21. A committee was then appointed to nominate permanent officers for the society, who should preside at our annual meeting, whereupon the chairman appointed the following: O. J. Parkell, B. Furness, and Wm. Banks, who presented the names of G. R. Tyrrell, President; E. Furness, Vice-President; A. Fahnestock, Secretary; and O. J. Parkell for Treasurer, all of whom were unanimously elected. The Secretary was then requested to hand a report of our proceedings to the La Porte city papers, and request their publication, and also to send a copy to the American Bee Journal and to *Gleanings in Bee-Culture*.

The President and Secretary were requested to read an essay on some important subject in the interest of bee-keepers, at the annual meeting. Owing to many bee-keepers being engaged in threshing grain and preparing ground for seeding, our convention was not as large as anticipated, but we have assurances that all such and others will be on hand at our next meeting. Quite a lively interest was manifested by those present sufficient to betoken a successful future for the society. On motion the society adjourned to meet Oct. 22, as before stated.

A. Fahnestock, *Sec.*
G. R. Tyrell, *Pres.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Diseased Colony.

I have a colony of bees which has been diseased during all of this season. A large portion of the brood dies before it is sealed, and some after. The live bees appear all right. The queen is a fine-looking one, and seems to be quite prolific. After the brood dies, it does not dry away, but remains soft and ropy, and smells very offensive, even at the entrance of the hive when passing by it. They have gathered just about honey enough to winter on. E. Loomis.

Smithville Flats, N. Y.

Answer.—You give a perfect description of malignant foul brood, which I would not have enter my apiary for less than its entire value. I know nothing about successfully treating it.

Fermented Honey.

Will you please answer the following questions through the Bee Journal: I have some extracted honey that has been working, and tastes a little sour; can I put it through any process to bring it back to a salable state? If not can you give me a recipe for making honey-vinegar? There was one in the Bee Journal recently, but it did not detail quantities or management.

Lacolle, Can. Wm. A. Pearson.

Answer.—If you expose your honey to heat, it will greatly lessen the fermented condition. You can not boil it, however, without injuring it in that way. I know of no way to make it into first-class, sweet sauce. I would advise you to put some in a tin pail, set the pail in a vessel of water which circulates freely under and all around it, and boil the water 10 minutes; then let the honey cool, and be your own judge as to whether or not it is merchantable. If fermentation has not gone *too far*, it will be all right, I think. Perhaps it will be worth more to you for feed for your bees, than for vinegar. You must have a neighbor who can tell you how to make vinegar successfully out of any properly diluted syrup or honey. A little good cider vinegar containing "mother," will help to start it; the secret then consists only in having the liquid contain just the right quantity of sweetness, to ferment readily and emphatically. We hear that a Chicago vinegar factory has recently discovered a chemical that will turn anything into vinegar, and have hoisted a sign over the door, that reads, "Who will care for 'mother' now?"

Wintering Bees in a Barn.

As I wish to avoid the expense of packing my bees on the summer stands, and having a cellar that is drained, and is still very damp, would it do to put the bees in the cellar provided that I would be sure of wintering them, or at least the most of them? The cellar is under a building which is used as a store-room, and is without a fire all winter. I thought I might put them in the second story of a barn which is provided with a door, and pack around them with chaff or straw. Would the bees come back to their hives, in the barn, if I opened the door (which is 7x4 feet) and let them take a cleansing flight? Which would be the better place for them, the barn or the cellar? The cellar can be kept at a certain temperature, and in winter is quite cool.

Daniel Duffield.
Dearborn, Mich.

Answer.—As I understand your "barn" proposition, I am very sure you would meet with failure if you should carry it out. Your cellar is the place for your bees. Put in enough of them to keep the temperature above the freezing point during the coldest weather. While I have no evidence that dampness is deleterious to bees in confinement, you can dry out your cellar by leaving all the doors, windows, or any other ventilators it may contain open during all that weather during the fall when the temperature outside is below 42° Fahr. before you put in the bees.

SELECTIONS FROM OUR LETTER BOX

The Bee-Killer.

Honey is not one-half a crop here this year. Bees did not work on white clover as they have done in other years. Smart-weed has yielded scarcely any honey. I have commenced to build a two-story shop, 20x28, so as to provide for my little workers. I begun the bee-business during the spring of 1882, with 3 colonies, and increased them that season to 24 strong colonies. In 1883 I commenced with 20 in fair condition, and increased them to 52. In 1884 I commenced with 50 colonies, and increased to 83, which will soon be ready for the cellar. I got about 1,500 pounds of honey this year. I send an insect which I saw catching a bee near my little apiary. They were at work on the nice Spanish-needle bloom when I saw this insect rest on a bloom, and it waited until the

bee lit on the bloom, it caught it, and in an instant the bee was dead. There seemed to be plenty around that bloom. J. A. REEDS.
Hindsboro, Ill., Sept. 1884.

[The insect is *Asilus Missouriensis*. often called the bee-killer. They are very destructive to bees.—ED.]

Excellent Report.

It has been a great year for honey here. I have one colony which has given me, on June 30, a swarm of bees and 60 pounds of white clover honey; and on Aug. 30 another swarm of bees and 27 pounds of goldenrod honey. About that time the first swarm cast a swarm and yielded 25 pounds of honey. If one could have all of the colonies do that well, bee-keeping would beat the cattle-ranch business all to pieces. R. E. HOLMES.
West Winsted, Conn., Sept. 1, 1884.

Golden Hive Sharpers.

Some parties have come to this city who are engaged in the sale of a bee-hive, or rather, are engaged in the hive swindle, and are selling territory on what is called the "Golden hive." The reason that I will not breed any more queens this season is that they have brought hybrid and black bees in the place, and they have drones by the thousands. The parties who are selling territory for the Golden bee-hive are telling the farmer bee-keepers that this is the very best time of the year to transfer, and that now is the time to extract the honey; when the facts are that the bees are not gathering enough honey to supply their wants, but are drawing on their stores. The hive which they are selling is not what a practicable bee-man wants, for it will not permit the use of sections. They advocate the use of the five-pound surplus frames made in the same way as the Langstroth brood-frame. My experience is this, that I cannot sell brood-frame honey for 8 cents per pound, when I can readily sell all my honey put up in the one and two-pound sections. L. J. DIEHL.
Butler, Ind., Aug. 30, 1884.

Bee-Keeping in the City.

I started with one colony in March 1883, increased it to 4, and got 50 pounds of comb honey that season. I began the season of 1884 with 4 colonies, bought one in a common bee-gum, and transferred it, but lost the swarm. The balance have increased mostly by natural swarming to 23 colonies and 2 nuclei; 20 of the colonies are very strong, and three have only 7 frames each filled out; but the brood-chambers are well filled with brood and honey, and all in good condition. I have taken 33 pounds of comb honey, and about 200 pounds of the purest, clearest honey you ever saw in supers. I will be able to take, from about ten hives, three frames each from the brood-chamber, of the same kind of honey. An old bee-keeper told me yesterday that it was the prettiest honey that he ever saw in his life. All this was gathered from figs. I am in the heart of the city, and forage was light until about July 10. Bees swarmed inordinately. One queen, by natural swarming, is the parent and grand-parent of 9 colonies this year. About July 10 the figs ripened, and the miserable English sparrows would make a hole in the figs, fill their crops and leave the balance for the bees, of which they were not slow to avail themselves. Almost every lot has from one to a dozen trees, and the trees are numbered by the thousands over the city. S. C. BOYLSTON.
Charleston, S. C., Sept. 3, 1884.

The Cone Flower.

I send you a sample of a flower that I wish you would name. It has been in bloom about two weeks, and the bees seem to gather honey from it, from early morn until late at night. It grows in the hollows and fence corners, and reaches 6 or 7 feet in height. I have 110 full colonies and nuclei. I have been in the business for 5 years, and have received about 3,500 pounds of surplus honey this year. The honey season has been a fair one in this State. C. T. BIGGERS.
Minerva, Ky., Sept. 2, 1884.

[It is called cone flower (*Echinacea*), and the bees get considerable honey from it.—ED.]

That "Adulterated" Honey.

In the BEE JOURNAL for July 23, page 475, Mr. Von Dorn charges Mr. F. H. Hunt of having sold as honey, in Iowa and Nebraska, a stuff unfit to eat. He adds that, after having promptly published a caution under his signature, he had put the matter into the hands of a chemist. In reply to this charge, Mr. Hunt, on page 563, says that the honey spoken of, had proved, by analysis, to be unadulterated. Now, I think that all of the readers of the BEE JOURNAL will agree with me if I say: First, that Mr. Von Dorn was too hasty in publishing his caution, under his signature, against Mr. Hunt, before having ascertained the veracity of his charge; second, that he was too hasty also in publishing it in the BEE JOURNAL; and third, that, as soon as he found that he had made an accusation unsupported by the facts, his duty, his strict duty was to publish, under his signature, that he had made a wrong accusation; and that his duty also was to immediately publish in the BEE JOURNAL the result of the experiment of the chemist; and that these duties were increased by the fact that these accusations were published under his name, as President of the Nebraska State Bee-Keepers' Association. Such public accusations are always detrimental to the honey-business; for they perpetuate in the minds of customers the false notion that bee-keepers adulterate their honey. CHAS. DADANT.
Hamilton, Ill., Aug. 6, 1884.

Motherwort.

Of clover honey there was only about half a crop; but it was of good quality. Bees are in fine condition for the fall harvest, which commenced about Aug. 12, and promises to be good, as we have had considerable rain, and bloom is plenty. I have 59 colonies, most of them ready for the harvest. Please name the enclosed plant; bees appear to like it. Is it of any value for honey? F. J. SAWIN.
Kirkwood, Ill.

[Motherwort, (*Leonurus Cardiaca*); a good honey plant.—T. J. BURRILL.]

Honey Crop a Failure for 3 Years.

The honey crop in this part of the country has been a failure for the last 3 years. Each year we have had a very good flow of honey from poplar sufficient to build up a good working force and yield us on an average, about 20 pounds of surplus honey per colony, the season commencing about April 25, and closing about May 25. Soon after that, the linn puts out an abundant bloom which has been destroyed by rain each year. This year the bees commenced work on it on Friday and worked well until the Monday morning following; we had five showers of rain that day, and about 21 showers per week for the next six weeks. I have not seen one pound of linn honey, that was gathered here within the last three years. With the exception of the first year, my bees have run me in debt each year since I have been here, which is four years; and that year we got about 45 pounds of honey per colony. NELSON PERKINS.
Princeton, Ala., Sept. 4, 1884.

Wild Sensitive-Plant.

I enclose two specimens of plants which grow very abundantly here, and upon which the bees work. No. 1 blooms from July 1 to Sept. 1. No. 2 from Aug. 15 to frost. The pollen gathered from No. 2 is deep red, and, judging from the bees entering the hive, a large per cent. of the honey gathered is from the plant, while goldenrod and buckwheat is abundant. Please give the names of the plants in the BEE JOURNAL.
Elk Point, Dak. H. H. BLAIR.

[No. 1 is the wild sensitive-plant *Cassia chamæcrista*). No. 2. *Dalea alopecuroides*, a somewhat near relative of clover. Both are excellent honey plants.—T. J. BURRILL.]

Best Honey-Flow for 26 years.

The weather for 10 days past has been very hot—90° in the shade on every day but one, Aug. 28. I did not have a colony that had over 5 lbs. of honey, but at this date (Sept. 9) every hive has its combs completely filled. As fast as the young bees hatch out, the cells are filled with honey. I have kept bees for 26 years and have never seen anything like it before. There is no immediate prospect of a change in the weather. HENRY ALLEY.
Wenham, Mass. Sept. 9, 1884.

Special Notices.

The Bee Journal for 1885.

$25.00 Cash Premiums.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly Bee Journal for 1885 is $2 00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly Bee Journal for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a *continual* statement of account.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50.** **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Notice to Correspondents.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for $5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

☞ In reply to many correspondents let us say that we take any kind of postage stamps as money, but coins should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Sample Copies of the American Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ We carefully mail the Bee Journal to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Emerson Binders—made especially for the Bee Journal, are lettered in gold on the back, and make a very convenient way of preserving the Bee Journal as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows :

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 25
" 200 colonies (420 pages)......	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

Prices Reduced.

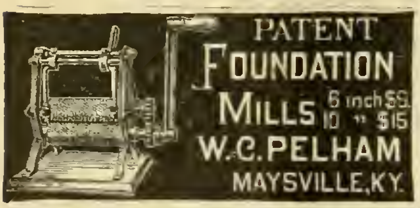
Owing to a decline in the price of Beeswax there will, hereafter, be a reduction of

5 cents per pound

on all orders for Comb Foundation.

I pay **26c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

ALFRED H. NEWMAN,
923 West Madison St., CHICAGO, ILL.



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$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
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Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

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1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
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Or, MANUAL OF THE APIARY.
11,000 SOLD SINCE 1876.
12th Thousand Just Out!
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More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, **$1 25.** Liberal discount to dealers and to clubs.

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State Agricultural College, LANSING, MICH.
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Pure Italian Queens, Bees, Colonies, Nuclei,
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24D10t Address, Sunny Side Apiary NAPA, CAL.

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I am now up with my orders, and can send choice queens by return mail. Send me your orders, and help me "out of the fire."
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(SECOND TO NONE)
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Also, Syrian and Carniolan queens, mated with Italian drones. Untested queens of either race, $1.00; tested queens of either race, $2.00. Special rates on large orders. Circular free. Send postal for it. **G. H. KNICKERBOCKER,**
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Is now making a specialty of rearing fine Italian queens. All queens bred from the purest and best of mothers, and the cells built in full colonies. Single queen, $1; 6 for $5; 12 or more 75 cents each. Tested queens, $1.50 each. Make money orders payable at Flint, Mich. He has a large stock of Queens on hand, and can fill orders **by RETURN MAIL.** 35Dtf

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AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published SEMI-MONTHLY, at Seven Shillings per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**
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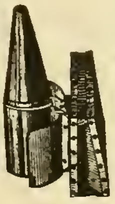
We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.



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Howard's importation of Holy-Land Queen are the only pure queens of this race in this country. We have 2 of the finest queens that Mr. H. imported, and will have by Sept. 15, 100 young queens from them. They will be fertilized 3 miles from all other bees, and we guarantee them to be equal in every respect to the imported queens. Price, $2.00 each. A copy of the Bee-Keeper's Handy-Book or one of our combined Queen and Drone Traps will be given with each queen. We can send you as fine Italian or Albino queens as can be purchased in the world. Warranted queens, $1.00 each ; tested, $1.50 ; select-tested, $3.00 each.—Secure your breeding-queens for another season.
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I offer HYBRID BEES for Sale in Langstroth or other hives, with 30 lbs. of good honey for wintering. Price, $4.00 per colony. R. S. BECKTELL.
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☞ Send 10c. for Practical Hints to Bee-Keepers.

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is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains **28** pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

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Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
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Croup—to Prevent.

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Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

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$1,300,000,

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Select-Tested, to breed from	$3.00
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Entries, Spaces, Stalls and Pens Free to all Exhibitors.

$50,000 CASH PREMIUMS!

APIARIAN Exhibits the LARGEST in the World!

HALF-FARE RATES on all Roads during the Fair.

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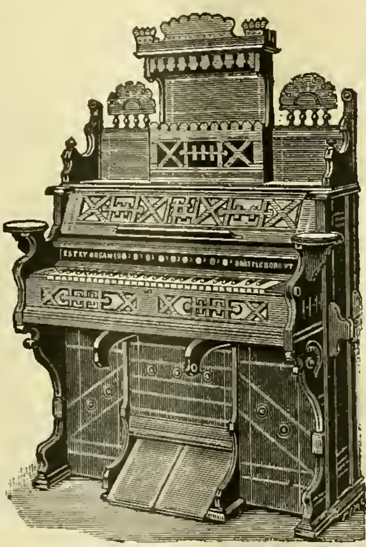

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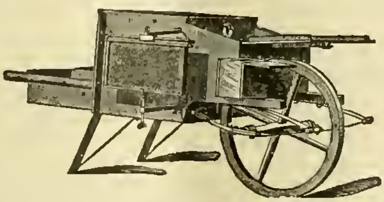

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Price, complete, only............$18.00.

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

1868. 1884.

HEDDON'S

COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

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Take your choice. Prices:

Tested, to breed from......	$ 3 00
Untested......	1 25
Untested, after July 1st......	1 00
Untested, (per doz.) after July 1st......	11 00

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And be SURE to state whether or not you have my Circular for 1883.

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Sixth Thousand Just Published!

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BEES and HONEY,

OR THE

Management of an Apiary for Pleasure and Profit; by

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Pure Italian Bees and Queens

For further information, send for Circular.

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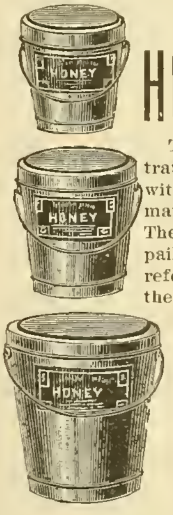


NEW

HONEY PAILS

The accompanying illustrations show a nest of pails with the sides tapering, for marketing extracted honey. The covers are deep and the pails are made with special reference to filling them for the retail honey-trade. They are made in a superior manner and are quite attractive in appearance, when filled and nicely labeled.

	4 lb.	7 lb.	13 lb.
Per doz.	$1.25	$1.60	$2.00
Per 100	8.00	10.00	14.50

A. H. NEWMAN,

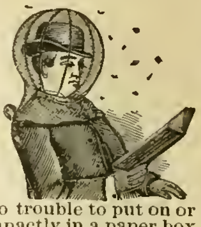
CHICAGO - - ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

A NEW BEE-VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

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We have the LARGEST FACTORY in the world for manufacturing first-class and SUPERIOR

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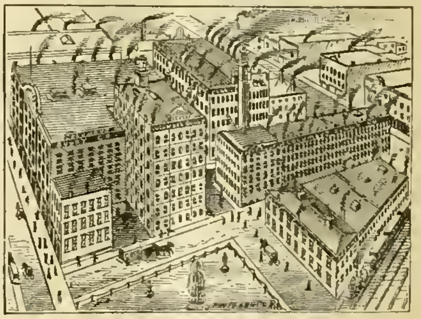

AND OUR POPULAR

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the latter most perfect and free from horse motion.

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Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

---

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.

923 West Madison Street, CHICAGO, ILL.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., September 24, 1884. VOL. XX.—No. 39.

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PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year ; Monthly, **50 cents.**

Entered at the P.O. as Second-Class matter.

TO CORRESPONDENTS.

The Subscription Price of the Weekly BEE JOURNAL is **$2.00** a year ; and of the Monthly, **50 cents** a year in advance. New Subscriptions can begin at any time.

Club Rates for the Weekly are : $3.80 for two copies (to the same or different post-offices) ; $5.50 for three copies ; $7.20 for four copies ; and for five or more copies, $1.75 each.

Club Rates for the Monthly are : two copies (to the same or different post-offices) for 90 cents ; three copies for $1.30 ; four copies for $1.70 : five copies for $2.00 ; more than five copies for 40 cents each.

Sending Money.—Remit by Express, Post Office Order, Postal Note, or Bank Draft on New York or Chicago. If neither of these can be obtained, Register your Letter, affixing stamps both for postage and registry, and take a receipt for it ; or send it by Express. Money, sent as above described, is AT OUR RISK, otherwise, it is not. Do not send checks on local banks, which cost us 25 cents each, at the banks here, to get them cashed.

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Subscription Credits.—The receipt for money sent us will be given on the address-label of every paper. If not given in two weeks after sending the money, write to us, for something must be wrong about it. Do not wait for months or years, and then claim a mistake. The subscription is paid to the END OF THE MONTH indicated on the wrapper-label. This gives a continual statement of account.

Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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THE AMERICAN BEE JOURNAL

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20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 7 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

TO CORRESPONDENTS.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

To Canadians.—We take Canadian money for subscription or books ; and Canadian postage stamps may be sent for fractions of a dollar.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

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CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
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and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

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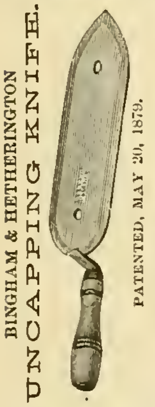
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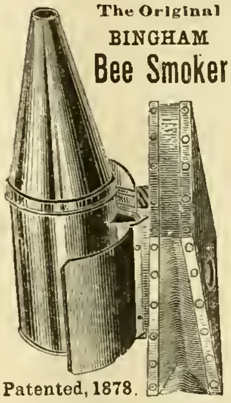
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Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, **$2** per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or $8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., SEPTEMBER 24, 1884. No. 39.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

International Convention.

In reference to the holding of an International Convention, Exposition, and Bee and Honey Show, at New Orleans, La., next winter, Mr. Wm. Williamson, of Lexington, Ky., remarks as follows:

> It has been suggested that the next National Convention be postponed to meet in New Orleans during the World's Exposition, which, according to the constitution, it seems, cannot be changed. It may prove well that it cannot. When the National Convention meets they should take into consideration the advisability of an International Convention and Exposition to be held in New Orleans some time in February, 1885. By fixing the date in February, it will allow plenty of time for the holidays and settling of January accounts, and those in business will feel more at liberty to attend. If such an exhibition is properly managed, and the bee-keepers and supply dealers throughout the United States and Canada will take right hold of it, their can be such an exhibition made as will surprise the World, and a world-wide market for American honey and supplies can be created. I hope a general expression on these suggestions will be made through the BEE JOURNAL.

That there could be such a Convention and Exhibition of Bees and Honey we have no doubt, if energetic and enterprising men should take hold of it, *push* it, and *make* it a success. But the great question is, where to find them. They must have experience, unbounded energy, and (more important than all else) plenty of time and money to devote to it.

Several, both in the North and South, have suggested that the Editor of the BEE JOURNAL should take the matter in hand, but we must *positively decline* the honor. We have neither the time nor the energy to spare to make it a success; nor will our health permit us to take any more burdens than those we now have in connection with publishing the BEE JOURNAL.

We would suggest that Dr. J. P. H. Brown, Mr. Paul L. Viallon, and Mr. Williamson be appointed such committee by the National Association—if that body entertains the proposition at all. If we were able to attend the meeting at Rochester, we certainly should vote to have such an Exhibition, and also that the above-named be the committee to take charge of it.

Bees and Honey at Louisville, Ky.

The following are the premiums awarded the best displays of bees and honey, placed on the tables at the Southern Exposition:

Best colony of Italian bees and queen, $10; G. W. Demaree, Christiansburg, Ky.

Best display of bees, $10; Jut. Mc Dowell, Louisville, Ky.

Best display of ten pounds comb honey, $10; Lewis Hofstatter, Louisville, Ky.

Best display of honey-broducing plants, $10; Lewis Hofstatter.

Best sample of comb honey and wax, not less than ten pounds, $5 premium; Lewis Hofstatter.

Best samples of extracted honey, not less than ten pounds, $5; Lewis Hofstatter.

Best sample of honey, $10; premium awarded to Lewis Hofstatter.

◆

☞ Mr. A. R. Kohnke is making a good display of honey, apiarian supplies and books, at the Fair at Youngstown, O., held from Sept. 23 to 26. Five dollars seems to be the extent of the premiums on honey, however.

◆

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly BEE JOURNAL for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

The Sting Amid the Sweets.

Under this heading, the Troy, N. Y., *Daily Times* gives the following incident, in the apiary of Mr. G. H. Adams, one of the prominent bee-keepers of the State of New York:

> Bee-keeper G. H. Adams, of Nassau, has divided his apiary into three parts, and distributed them as follows: One yard in Nassau, one in Sandlake, and one in the vicinity of Troy. Mr. Adams visits the several yards weekly, extracting honey. Saturday he was engaged at the yard near this city. Bees, it is well-known, are neither amiable nor hospitable, but regard all visitors as intruders. Two young ladies desired to witness the interesting operation of extracting honey, *i. e.*, transferring the liquid nectar from the hives into vessels suited to transportation, without injury to the honey-comb except "uncapping." The operator made no objection. But scarcely had the young ladies placed themselves in position to enjoy the scene before a fiery-tempered bee flew viciously at the "bangs" of the nearest lady and declared war. Piercing screams and frantic gesticulations followed till the little assailant was dislodged. The ladies had now seen enough, and retired in good order to a dwelling in the immediate neighborhood, but just as they reached the supposed place of safety, it was discovered that another spiteful honey-gatherer had improvised a masked battery under some portion of the other lady's dress and proposed to fight it out on that line. Screaming and violent demonstrations were resumed till this venomous little fellow was also disposed of, and the ladies finally departed, considerably wiser than when they started out in pursuit of knowledge. "Each pleasure has its poison, too, and every sweet a snare."

◆

☞ Cultivate a home market for your honey. If you cannot sell for cash you can often make good trades in other things that will pay you as well if you farm. If you can sell honey at 12 cents a pound to your store-keeper, to be taken out in trade, you are not doing badly at all.—*Texas Farm and Ranch.*

◆

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 1.—Monroe City, Mo. at Monroe City, Mo.
Dr. A. Noland, Sec.

Oct. 1, 2.—Cedar Valley, Iowa, at Waterloo, Iowa.
H. O. McElhany, Sec.

Oct. 1, 2.—Cedar Valley, Iowa, at Waterloo, Iowa.
H. O. McElhany; Sec.

Oct. 2.—Whitesides, Ill., at Morrison, Ill.
A. B. Kreider. Sec.

Oct. 2.—N. W. Ohio, at Defiance, Ohio.
W. H, Ralston, Sec.

Oct. 3.—N. Ind. and S. Mich. at Goshen, Ind.
F. L. Putt, M. D., Sec.

Oct. 4.—Progressive, at Bedford, O.
J. R. Reed, Sec.

Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec.

Oct. 4.—Wabash Co., at Wabash, Ind.
Henry Cripe, Sec.

Oct. 8.—Central Illinois, at Bloomington, Ill.
W. B. Lawrence, Sec.

Oct. 00, 00.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson. Sec.

Oct. 22.—N. W. Ind., at Laporte, Ind.
A. Fahnestock, Sec.

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Nov. 10.—Will County, Ill., at Beecher, Ill.
Gustavus Kettering, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Bees and Honey at the St. Louis Fair.

Mr. R. Grinsell, Baden, Mo., writes as follows concerning the Bee and Honey show at the St. Louis Fair, to be held from Oct. 6 to 11, 1884:

Please publish the Premium List offered by our St. Louis Fair Association. As they have increased the amount offered for premiums last year from $50 to $150 for this year, with the understanding that we increase the exhibit, and to do so we need more exhibitors, and we invite bee-keepers from all parts, as well as supply dealers, to bring on their goods and compete for premiums. As bee-keeping is only in its first stages here, we need to give it a boom. Here is the list of premiums offered:

	1st	2d
Best colony of Italian bees in movable comb hive	$10	$5
Best colony of Cyprian bees, in movable comb hive	10	5
Best colony of black bees, in movable comb hive	8	4
Best collection of queen bees alive	4	2
Largest and best display of comb honey, quality and manner of putting up for market to be considered	10	5
Largest and best display of extracted honey, quality and manner of putting up for market to be considered	10	5
Largest and best display of samples of extracted honey of different kinds	5	3
Largest and best display of honey-producing plants, pressed and mounted, or in bloom	3	2
Largest and best display of apiarian implements	10	5
Largest, best, most attractive, interesting and instructive exhibit, all things considered	10	5
Best comb foundation machine	5	3
Best specimen of comb foundation made on the grounds	3	2
Best specimen of beeswax, not less than 5 lbs	2	1
Best machine for piercing frames for wiring	3	2
Best bee-hive for all purposes	5	3
Best crate of honey in comb	L. Sil. Med.	
Best bee-hive for all purposes		Dip.
Best honey extractor		Dip.
Best wax extractor		Dip.
Best bee-smoker		Dip.
Best honey knife		Dip.
Best bee-veil or face protector		Dip.

The National Convention.

☞ The date for holding the next meeting of the North American Bee-Keepers' Society, in the city of Rochester, N. Y., has been fixed for Oct. 28, 29 and 30, 1884. At the last meeting of the Northeastern Bee-Keepers' Association a committee was appointed to secure a Hall and make other necessary arrangements for this meeting. Knowing the men who compose this committee, we can assure all who are interested, that the matter is in good hands, and that everything will be arranged for one of the best meetings ever held by the Society. Rochester is one of the finest cities in the United States, and this should be an enjoyable meeting for all who are interested. We hope soon to announce a complete programme. C. C. Miller, *Sec.*
L. C. Root, *Vice-Pres.*

☞ The bee-keepers' association of Central Illinois will hold their quarterly meeting at Bloomington, Ill., on Wednesday, Oct. 8, 1884, at 10 a. m.
W. B. Lawrence, *Sec.*

☞ The Progressive Bee-Keepers' Association meets on the first Saturday in October, 1884, at Bedford, O. A general invitation is given.
J. R. Reed, *Sec.*

☞ The Monroe City, Mo., Bee-Keepers' Ass'n will meet at Mr. J. H. Poage's apiary on Wednesday, Oct. 1, 1884. A full report of the year's labor will be expected from every member. All who are interested in the production of honey, or the marketing of it, are cordially invited to be present. A. Noland, *Sec.*
Mrs. Amanda Knox, *Pres.*

☞ The Whiteside Bee-Keepers' Association will meet at Morrison, Ill., at 1 p. m., on Oct. 2, 1884. All bee-keepers are cordially invited.
A. B. Kreider, *Sec.*

☞ The Northern Indiana and Southern Michigan Bee-Keepers' Association will hold its next session in Goshen, Ind., on Oct. 3, 1884, at 10 a. m. Important topics relating to the management of the apiary will be discussed. Considerable time will be devoted to answering questions from the query-box. Several distinguished apiarists are expected to be present. All persons interested in bee-culture are invited to attend. A large meeting is anticipated.
F. L. Putt, M. D., *Sec.*
A. Blunt, *Pres.*

☞ The Wabash County Bee-Keepers' Association will hold its second meeting on Saturday, Oct. 4, at the Court House in Wabash, at 10 a. m. All bee-keepers are cordially invited to attend. Come one and all and bring your wife and children, and we will try and make it interesting for you. Henry Cripe, *Sec.*
Aaron Singer, *Pres.*

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Sept. 22, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX—Is dull at 26@28c on arrival.

C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11½@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey sells slowly. Prices are about 14 to 16c. for very best in small frames. Receipts are not large of late. Extracted honey, quiet sales at 6 and 7c. Large offerings of California honey. Look for better demand for honey now that the weather is cooler.

BEESWAX.—For best yellow or prime, 30c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY.—Arrivals this week were lighter than last. Stocks in store here cannot be termed heavy, but they are larger than the demand. There is an absence of competition among buyers. Parties who show any disposition to purchase, refuse to operate at the slightest advance on quotations. Several hundred cases of choice extracted were taken for shipment at 5c. White to extra white comb, 9@11c.; dark to good, 7@9c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 25@30c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c; in a small way 17c is occasionally obtained, but 16c would be the more reliable quotation; 2-lbs., best white, 14@15c; second quality slow at 10@12c. Extracted slow at 8@9c.

BEESWAX—30c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY.—Active and in good demand at former quotations. Choice comb, ½-lb., 18c.; 1-lb., 16c.; 2-lb., 15c. Off lots, anywhere from 10 to 14c. Extracted, dull, 6½ to 7½c.

BEESWAX.—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

CORRESPONDENCE

For the American Bee Journal.

Is Honey Poisonous?

A. OSBORN.

On page 567 is an article headed as above, to which I desire to add my mite in the way of personal knowledge and experience. The subject of poisonous honey is nothing new to me. I do not believe that pure honey is poisonous in the least; yet there are some persons who claim that they dare not eat even a very little of it. Some persons tell me that if they would eat only a little of it that it would cause cramping pains, colic or sickness at the stomach. Now, these persons were all perfectly honest in their belief that it was the honey which caused all this mischief.

I say that any one can eat pure extracted honey and be in no danger of any bad effects. After I had explained the cause of the trouble to such persons, in every instance I have succeeded in getting them to eat honey without any bad effects. I desire to ask this question: When a bee stings you, what is it which causes the pain? Is it simply the sting piercing into your flesh, or is it the poison which is deposited in the flesh through the sting? I think that you all will say that it is the poison. I presume that most of you have noticed on opening a hive on a cool day, or early in the morning, that the bees would be buzzing around on the combs with their stings pointing outward, and on the point of the sting would be a drop of fluid which is the poison that the bee deposits in your flesh that causes the pain from the bee-sting. Now, the bees being disturbed so often in this way, causes them to run all over the combs, and this drop of fluid either drops off or is rubbed off on the comb or the capping of the comb honey and dries there; and among so many bees in a full colony, and disturbed so often as they are, causes a large quantity of this poisonous fluid to be deposited on the comb and remains there, as it soon dries. If a poisonous substance will give such great pain externally what hinders it from giving pain when taken internally? There is where the whole secret of this poisonous honey is. All who eat comb honey, eat more or less of this bee-poison, and not poisonous honey as some call it.

To all "lovers of honey" who claim that they cannot eat honey without its causing them colicky or cramping pains, I will say: Try eating pure extracted honey; not strained honey, as that is as unsafe to eat as the comb honey. Try eating a little extracted honey at a time, and you will soon become eaters as well as lovers of honey. Try it, and be convinced that pure honey is not poisonous.

Now, probably Dr. Tinker or some one else will ask the question, "Why does not the eating of comb honey affect all persons alike, if it is the bee-poison on the comb which causes the trouble? In the first place, if all persons' stomachs were the same in every way, and all persons' constitutions were the same in every way, then you would see all affected alike with whatever they eat or drink, all being in same condition of health; therefore, all persons not being constituted alike is the cause of the different effects of the same substance taken into different stomachs.

Centerville, Iowa.

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For the American Bee Journal.

The Origin of Honey-Dew.

CHAS. DADANT.

As I see two contradictory opinions in regard to honey-dew, I desire to bring before the bee-keepers a few quotations from a French book, *Les Nectaires*, containing 130 figures, published in 1879 by Mr. Gaston Bonnier, *maitre des conferences a l'ecole normale superieure de Paris.*

In this book Mr. Bonnier relates innumerable experiences made by himself and scores of other scientists of France, Germany, England, Italy, etc. He writes on page 165: "The nectar is produced by floral and extra-floral nectaries. The floral nectar is what is known as honey; the extra-floral nectar is known in France as *miellee*, and in the United States as honey-dew."

In some parts of France, in Saone and Loire for instance, the bee-keepers bring their bees in the vicinity of plants producing this *miellee.* The sugared liquid contains the same sugar as honey.

Mr. Bonnier has seen honey-dew *without aphidæ*, on two kinds of oaks, ash, two kinds of linden, sorle-tree, barberry, blackberry, raspberry, poplar, birch, two kinds of maples, and hazel-nut. These trees were covered with insects.

On page 78: "The sugars belong to two general groups. The saccharoses and the glucoses. The first are found accumulated in certain parts of the vegetals, very often plainly located as in beets, sugar-cane, and carrots. The second are spread in nearly all the parts of the plant as long as it is growing."

On page 89: "We can study the accumulations of the saccharoses and glucoses in the nectariferous tissues of the plants. We find them: 1. In the cotyledons; 2. in the leaves; 3. in the stipules; 4. in the bracteas; 5. between the leaf and the twig; 6. in the sepals; 7. in the petals; 8. between the sepals and the stamens; 9. in the stamens; 10. between the sepals, petals or stamens, and the carpels; 11. in the carpels; 12. at the common base of all the floral organs."

Then he related all the experiments which he made on all these parts of the plants, with quotations of a number of other experiments made by scientists. Page 149: "Generally it is in a state of vapor that water is perspired by the tissues of the plants; yet, in certain circumstances, when some tissues emit a great amount of water, and when the air is loaded with dampness, a part of the water remains condensed on the epiderm, and exit in part in a liquid state."

The water, which passes through the tissues and exit at the surface of the plants, may contain several soluble substances. It is easy to understand that, according to the tissues crossed, the proportion of the substances dissolved will vary. Of course the water which has crossed the sugared tissues is abundantly loaded with sugar. A leaf can or cannot emit liquid, all the other conditions being the same, this emission depending on its anatomical structure,

On page 151: "Under the influence of several causes, the liquid absorbed by the plant arrives in the nectariferous tissues, it loads itself with sugared substances, and, in a number of plants it may exit, in a great many circumstances, in the form of sugared liquid."

On page 157: "On account of the evaporation which occurs at the surface of the plant, the quantity of liquid will be more or less abundant according to the greater or smaller dampness of the air. So, dampness of air, moisture of the soil and temperature cause the smaller or greater volume of the nectar produced, and the quantity of the water that it contains."

A great many of the experiments made by Mr. Bonnier, took place at Lonye, in the apiary and with the aid of Mr. De Layens, a well-known French bee-keeper, whose apiary was lately pictured in the BEE JOURNAL.

I beg to give a little of my experience about this honey-dew: As my home is joining a timber, I have had many occasions of seeing this production of honey-dew; yet, so far, I have been unable to see any aphis on the trees.

I beg the partisans of this aphis theory to answer the following questions: In March, when a very few warm days have just begun to swell the buds of the oaks, if we have a sudden diminution of temperature, we are sure of seeing bees working on the buds of oaks; yet these buds are hardly swelled. From where did these aphidæ come, which have produced this honey-dew? Is it not the result of the emission of sugared liquid by the stipules?"

During this spring we have had several sudden changes of temperature, every one followed by honey-dew; why after such changes, or when a cold night followed a warm day, and not every day? Of course I do not pretend that the bee-keepers who saw the aphidæ on the leaves of maples, were mistaken; but I think that the great number of aphidæ was caused by an abnormal production of honey-dew and not the cause of it.

When a tree emits honey-dew, while some other of the same kind does not, it is either because one is in a soil more damp than the other, or because it is in a morbid state, a were the maple trees which have been seen loaded with honey-dew and aphidæ.

Hamilton, Ill.

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For the American Bee Journal.

St. Joseph, Mo., Bee and Honey Show.

APIARIST.

The sixth annual exhibition of the St. Joseph, Mo., Exposition closed to-day. The weather was fine, the attendance large, and the displays in all departments were good.

The amount of honey displayed in the apiarian department was not so large as last year, but the premium list was much larger and more comprehensive, and there was a greater variety of articles on exhibition. Increased space was given to the department; and at the suggestion of the Superintendent, the Board had a space enclosed with wire-cloth for the special display of the internal workings of a colony of bees.

The Superintendent of the department, Mr. E. T. Abbott, of St. Joseph, got out a very neat eight-page paper, cut and pasted, in the interest of bee-culture, and distributed 2,000 copies of them during the week. It attracted considerable attention, and will, no doubt, aid the cause of advanced bee-culture in the future.

There were three very fine displays of apicultural literature, which represented about all of the bee-books and bee-periodicals published in this country, besides a number of foreign publications.

Mr. E. Armstrong, of Jerseyville, Ill., had a fine display of hives, honey, bees, etc. The neat and tasty way in which his honey was put up and arranged, attracted much attention and had a great deal to do in securing him a number of the first premiums. We hope that another year others may profit by his example.

One of the things which called forth many inquiries from the curious, was an Excelsior Extractor on exhibition by Mr. A. H. Newman, of Chicago. As Mr. N. was not present, the Superintendent was kept busy explaining that it was not a "churn," an "ice-cream freezer," or a "washing-machine"—all of which the ladies persisted in calling it, notwithstanding the fact that the name was plainly written upon it.

Mr. Alley's drone excluder, which, by the way, reached here too late for entry, was carefully examined by many bee-men, and received much favorable commendation.

The event which attracted the most attention was the transferring, by the Superintendent and Mr. Armstrong, in the manipulating-room, of a colony of bees from an old box-hive to one of modern make with movable frames. The transfer was quickly made, and excited the wonder and astonishment of many present who had never seen any thing of the kind performed.

It may be worthy of mention that among the exhibitors was a young lady who had a very fine display of comb and extracted honey, and whose work indicated that she was "up to the times" in bee-culture.

In conclusion we would remark that the officers of the Exposition deserve much praise for the encouragement and space which they gave to this department. It is to be hoped that the action and interest of apiarists will be such in the future as not to cause them to regret it.

St. Joseph, Mo., Sept. 6, 1884.

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For the American Bee Journal.

Marketing Honey in Small Sections.

B. E. FASTS.

After five years of toil and care I have learned a little about bees, and this year I had about 1,000 pounds of honey in one and two-pound sections. So, after I had it ready to market, I started out to see how much I could sell; but before I started, I looked the BEE JOURNAL over to see how the honey markets were, and I concluded to charge about 17 cents per pound for the two-pound sections, and 20 cents for one-pounds. This was on Saturday, and I sold nearly all of the two-pounds. I did not take any of the one-pounds with me, for I thought that if I did, the people would want both at the same price.

On the next Wednesday I delivered my orders, and at the first store they told me that I had charged them too much, for some other fellow bee-man had been around with his honey at 16 cents per pound; but I told them that my honey was all in good shape, and that I did not want to take any less for it, so some paid 17 cents and some 16 cents.

Another bee-keeper had been around with a load of one-pound sections, and did not wish to take it home, so he sold it at 16 cents. Now, where am I, at 20 cents? I did not sell any. I think the last-mentioned bee-keeper did not take any bee-paper or inquire as to the price of honey, or he never would have sold one-pounds for 16 cents. I am afraid this will be the outcome of the one and the one-half-pound sections, that we will have to sell them for the same price as the two-pounds.

I, for one, do think that every bee-keeper should look at this one-half-pound section question in the right light. Some say that there will be more of them used, but I do not believe it. I think that it will be just the other way. Any one who will buy one-half-pound sections will take one-pounds. One-half-pounds do not show as well as the one-pounds, and do not pay as well, nor can any body get the price to make it pay as well. I think we all should drop out the one-half-pounds, and never think of such a thing again. The one-pounds are small enough, and nobody will make them pay as well as the two-pounds. I think, perhaps, we shall have to use them some, but let us cut them down to as few as possible.

Sections without glass, is another thing which we ought to consider. I found 3 or 4 merchants who told me that they would not keep honey for sale; for it runs all over every thing and makes too much of a muss. Every one knows that honey without glass is not as safe to handle as with glass. The glass helps to keep the honey in the sections, and by its use nobody can stick their fingers into it, and if it should fall over, it does not break. Just so many stores as there are that do not keep honey, just so much less honey will there be sold. I would rather give the glass away than to let my honey go to market without glass, and I think it will pay us all better.

I do not want any bee-keepers to think that I am telling them something new, nor do I want to find fault with anybody, but I do think that honey should be sold before bringing it to market. I am only a beginner in the honey-business, but I am going to try to keep up with the times.

Utica, N. Y.

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For the American Bee Journal.

Will County, Ill., Convention.

The meeting of the Will County Bee-Keepers' Association was held on Sept. 1, 1884, at the house of Mr. W. Cassens, in the village of Monee, Ill.

Mr. A. Wicherts, chairman, being absent, Dr. Ruden, of Beecher, was elected to act as temporary chairman. After reading the minutes of the last meeting, a motion was made by E. P. Philipps, that the report be adopted, which was unanimously carried.

The topics proposed for discussion were the following: 1. "How many colonies of bees can be kept at one place with profit?" 2. "Is wired foundation a success in the brood-chamber?" 3. "Are winter passages in the combs necessary?" 4. "Why is it that bees did not do as well this year as last, in this neighborhood?"

The first question was discussed at some length, and almost every member agreed that a locality could not be overstocked; and that there are millions of honey-producing flowers which are never visited by the honey-bees.

In regard to the second question: It was decided that the wired frame is the one, and the only one, that should be used in the brood-chamber; although some of the members differ as to how the wire should be placed in the frame. W. Cassens prefers a straight up-and-down wire in three places of the frame, one in the centre, and one on each side, say about 2 inches from the end. G. Kettering favors altogether a different wiring, claiming that he can make a stiffer frame, and secure just as straight a comb with less wire and much less work, by commencing in the centre of the top-bar, just above where you fasten the foundation, and punching a small hole through it with an awl, and two holes on the bottom-bar, say about 2 inches from the end on each side; then run the wire through those three holes and fasten it. This makes a very good support for the foundation, and it also makes a good brace for the frame.

The third question did not take much time, and was decided that it was not necessary to have winter passages in the combs.

In regard to the fourth question: Mr. B. Hayen, one of our oldest bee-keepers, claimed that our bees swarmed altogether too late, this year. He laid it to a spell of cold, rough weather just at the time when colonies ought to cast swarms. He further says that if our bees had swarmed as they should have done, or as they generally do, we would have had fully as much honey, this year, as we did last; and when we had our best honey-flow, this year, bees laid before their hives looking at us, and waiting for a swarm to issue. Every member present agreed with Mr. Hayen that this was the cause, and nothing else.

Mr. Cassens made a motion that our next meeting should be held at Beecher, Will County, Ill., on Nov. 10, 1884, at the office of Dr. Charles Ruden, which was unanimously carried. By motion the meeting then adjourned.

GUSTAVUS KETTERING, *Sec*
CHAS. RUDEN, *Pres. pro tem.*

For the American Bee Journal.

Winter Management of Bees.

J. M. HICKS.

It is usual for the apiarist to look after his colonies of bees and see that each one is in good condition for wintering. We will suggest, as a rule, that from Nov. 1 to the middle of December is a good time to look after the bees, and see that they have a sufficiency of honey to last them through the winter. Perhaps in some seasons it should be attended to earlier. A good colony of bees should have at least 15 to 20 pounds of honey stored in the combs. It is now a mooted question as to whether it is advisable for a colony to possess a very great quantity of pollen in their winter stores.

It has been asserted, and we think very justly too, by some who profess to be well versed in the science of apiculture, that pollen is the true cause of so much disease among bees during the winter months, and especially very early in the spring do we often hear of complaints about the bees having diarrhœa. As a remedy for this trouble, we further suggest that salt-water be placed in wooden troughs and set within a few yards of the bees, and then we think there will be but little risk to run in bees keeping perfectly healthy if all other things are in proper condition, such as ventilation, good, pure food, and a comfortable shed, which should always be provided for them by the bee-keeper. The shed should have an eastern front, but if it cannot be thus made, our next choice would be a south front. All bee-sheds should have a close-fitting back, and a well-shingled roof.

If these suggestions are attended to at the right time, and prepared with as due regard to comfort for the bees as any other stock on the farm, we would have no cause for complaint. A good farmer never thinks that he has done too much for his horses, cows, sheep and hogs, by building good barns, stables and pens in which he can have all his farm stock protected from inclement weather.

The question has often been asked, "Is it necessary to build good winter quarters for bees?" We answer that it is just as essential as it is for any other stock. It is true that we do not pay as much for a colony of bees as we do for a cow or a horse; but it is no less the duty of the husbandman to protect and care for the bees by providing the proper sheds for them, when they "board themselves," and often return a large surplus of honey.

Battle Ground, Ind.

For the American Bee Journal.

Management of Long Hives.

W. H. S. OROUT.

Mr. Buswell wishes me to describe my system of management of long hives, and why I prefer them to two-story hives. I use, substantially, the Kidder frame, 13 inches long and 11 inches deep, inside measure, and hives 40 inches long inside, made double-walled at the sides, and high enough to allow of packing over the frames. Finishing nails are driven into the frames to hang by, and hoop-iron to hang on, which facilitates rapid handling, and very few bees are crushed. Italian bees are preferred, for it is generally conceded, I believe, that they will labor best near their brood. I use a division-board, and when the bees are strong enough—say, crowd half their hive—give them the whole length by alternating frames of empty comb with the brood (when the honey flow comes). When the honey is ripe enough to extract, the bees are shaken inside more readily than in two-story hives, and a frame nearly filled with brood is left for them to cluster on, and all the rest emptied by a 4-frame extractor, and then returned. When the honey-flow is abundant, I spread the combs so as to use 18 in a hive. I have repeatedly tested two-story hives against the long ones for extracted honey, and every time I have received more honey from the long ones. They are very convenient to use as tenement hives; in fact I usually winter 2 colonies in a hive. Feeding is very readily done, and by means of the division-board the colony can be contracted at will. I could always get more honey in two-story hives by putting part of the brood into the upper story and filling out with empty combs, than by having all empty combs in the upper story. The swarming-impulse is more readily controlled in long hives, as there is plenty of room and shade reducing it to a minimum. None have issued this year, and when they do all the queens' wings are clipped, so that they cause little trouble. I think that the queens are more prolific in this style of hive. One queen, this summer, kept up 17 frames of brood, averaging ¾ full. Right here allow me to say that natural queens either reared under the swarming-impulse or supersedure are, in my opinion, much superior to artificial queens unless they are reared by some such method as Alley's. They are more readily packed on the summer stands for winter, there being no loose boxes to move away during each spring. The main entrance is in the front end, and by placing the hives 3 or 4 feet apart, one can have a side entrance midway, and artificial swarms are made very readily by the use of a division-board. I think two or more colonies will winter better together than in separate hives. It is a question with me whether they are as suitable for comb honey, but I think that I would risk it. By using a side entrance, and only one colony in each hive, one could have side storage as well as top. Their main disadvantage is in being too cumbersome to readily move into winter quarters.

Kennedy, N. Y.

Somerset, Maine, Convention.

The fourth semi-annual convention of the Somerset and Western Piscataquis Bee-Keepers' Association met at the residence of W. H. Norton, at North Madison, Me., on the 20th ult. The meeting was well attended, there was an unusual interest evinced in the objects of the meeting, and all seemed to enjoy the occasion highly. There were representatives from four different counties.

The first hour of the forenoon was spent in Mr. Norton's apiary, examining his bees, queens, appliances, furniture, etc., and in an informal talk by all in relation thereto. Mr. Norton has about fifty colonies arranged in due form on his lawn in front of his house, with as many small nuclei colonies for rearing queens, arranged systematically between the other colonies. His bees are of the Holy Land or Syrians, and a cross between them and the Italians.

At eleven o'clock the members were summoned to the stand beneath the wide-spreading foliage of Mr. Norton's noble apple trees, where ample seats were provided. After the usual opening exercises, Mrs. Wm. Lawrence, of Wellington, gave a *resume* of the essentials of practical and successful bee-keeping for beginners, or those who would keep only a few colonies for supplying honey for their own tables. It was an able digest of those necessary things which go to make bee-keeping a pastime and a profit. At noon the whole "swarm" of bee-keepers in attendance were invited by Mrs. Norton, to dinner, where several bountifully laden tables were provided for regaling the physical system, and no "drones" were there among the "busy workers" during the repast.

The afternoon's exercises consisted in discussing the care and preparation of bees for the fall and winter months, with brief addresses by the principal members, on their methods of management of bees.

Mr. Reynolds, of Clinton, said that he reduces the number of frames to six or seven, puts chaff-cushion division-boards on each side of the frames in the ends of the hive. He winters his bees in the cellar and on the summer stands, and has strong preference for the black bee. He would also prefer the cellar as the safer place in which to winter bees.

Isaac Ames, of Skowhegan, winters his bees out-doors and in the shed; covers the entrance with perforated tin, to prevent the bees' coming out during a warm spell, and keeps the hives exposed to the rays of the sun in winter. He uses the old box-hives, and was advised to transfer the bees at once.

Gilbert Dunbar, of Embden, winters his bees, both out-doors and in the cellar; puts the frames in the middle of the hive, and uses division-boards in each end with chaff packed in. When he takes them out of the cellar in spring, he puts straw around each hive to ward off the cold and wind.

Jotham Whipple, Jr., of Solon, finds that the black bees are hardier than Italians, and prefers the former every time, as far as his experience goes.

Z. D. Ingalls, of New Vineyard, had three colonies last spring; now he has eleven. His bees have not stored much honey, but have bred well. He is very much interested in bee-keeping, and by earnest effort and study he hopes to succeed.

Mr. Paine, of Cornville, had two colonies in the spring and now has eight; has the Holy Lands and blacks, four colonies of each, but does not see much difference in the two races as regards honey.

Horace Hall, of Canaan, experienced some trouble in hiving swarms. He was advised to shake the cluster down in front of the hive and drive them in with a smoker. He keeps the Holy Lands.

W. H. Norton, of North Madison, said that he usually has bees enough in each hive, when winter sets in, to fully cover eight Gallup frames so as to form one solid cluster. If some hives have less, he takes from those which have more, and thus equalizes all his colonies. If any have not stores enough to winter on, he feeds them with sugar syrup during the fall. He said that he would rather have a colony with no honey, on September 1, than to have it with a full supply of summer and fall honey; for then he would be sure that they would winter better. He would spread or put the frames apart in the autumn, so that the bees can cluster in larger masses, thereby keeping up more warmth. He winters them in the cellar, gives no direct upward ventilation, and puts two inches of chaff in a burlap sack on the top of the frames, with a chaff division-board in the ends of the hives, at the side of the frames. His hives are all about eighteen inches long with Gallup frames.

Several others made more or less remarks until the hour for parting arrived. It was decided to hold the next meeting at Harmony, on Saturday, May 9, 1885.—*Home Farm.*

For the American Bee Journal.

"Honey-Dew—What is It?"

CHAS. SAMSEL.

Mr. Kemp, on page 536, writes on this subject, and tries to prove that honey-dew is not the product of an insect, but is produced by atmospheric influences. He argues that, because both insects and honey-dew are found on the same leaf, and at the same time, it is *not* evidence, that one produced the other, or that one cannot exist without the other. If this is not positive evidence, it is at least strong circumstantial evidence. Men have been hanged on evidence less convincing.

He further states that this dew is formed only upon a hard, smooth, glazed leaf, while it is never formed upon rough, soft, porous leaves. This proves nothing; for while we are willing to admit that the latter absorb the dew, it is just as possible to absorb it when thrown upon them by the insect, as from the atmosphere.

Now, if Mr. K.'s theory, namely, that it is produced by atmospheric influences (which I take that it means saccharine condensation) is correct, how does he account for its presence in green-houses and conservatories, in a building say 15x40 feet, in the dead of winter with an artificial temperature ranging from 50° to 80° Fahr.? It is simply impossible, and yet it abounds.

The orange and the lemon tree, the climbing stephanotis, and the roses, as well as many other exotics, if not closely watched, soon fall a prey to the scale and the mealy-bug (those scourges of the green-house), and become covered with this dark-colored, sooty, sticky stuff to such an extent that if not washed leaf by leaf with sponge and water, all the summer rains will fail to remove it entirely.

When the florist finds this dew upon his plants, it is often the first indication of the presence of these insects; and when Mr. K. says that he has found the honey-dew upon leaves, which, under a powerful microscope, showed no insects, I think that his search was not thorough enough; for, be it remembered, these insects seldom infest the leaf itself, but harbor upon the soft, young wood, and are generally so flat, and of a color of the wood, that they may readily be overlooked, besides they may be found upon adjacent plants or trees.

But we have positive proof that the insects, aphidæ, do produce honey-dew, and refer the reader to Langstroth on the Honey-Bee, page 286, where he cites as follows: "Mr. Knight once observed a shower of honey-dew descending in innumerable small globules near one of his oak-trees. He cut off one of the branches, took it into the house, and, holding it in a stream of light, admitted through a small opening, distinctly saw the aphidæ ejecting the fluid from their bodies with considerable force, and this accounts for its being frequently found in situations where it could not have arrived by the mere influence of gravitation, etc."

Now, while we deny that honey-dew is formed by saccharine condensation, we do not contend that it is produced by insects exclusively, but believe it possible that it may exude from the leaves of some plants and trees under favorable circumstances.

Easton, Pa.

* * *

For the American Bee Journal.

W. N. Y. and N. Pa. Convention.

The semi-annual meeting of the Western New York and Northern Pa. Bee-Keepers' Association was held in Armory Hall, at Jamestown, N. Y., on Sept. 1 and 2, 1884. The meeting was called to order by President Elkins at 1 p. m., on Sept. 1. Mr. Shewman, the Secretary, being absent, Mr. Page called the roll, read the minutes of the last meeting, and also the constitution and by-laws, and stated that it would be impossible for the Secretary to be present at this meeting. Mr. Page was then elected Secretary *pro tem;* but also being Treasurer, he resigned, and Chas. E. Gates was appointed in his place. The Treasurer then read his report for the last six months, which was accepted.

Nothing else being before the convention, discussion of questions was next in order. The first question was, "In how short a time can a queen be reared?"

Mr. Caswell: I have reared a queen and placed her in a queenless colony in 13 days.

Mr. Grout: I have used what are called artificial queens (*i. e.*, those reared from a worker larva), but they are short-lived.

Mr. Sleeper: I think that the amount of royal jelly makes a good deal of difference. I have always found that queens hatching out and leaving the cells dry, proved to be poorly-developed, and were generally superseded by the bees; while those hatching out and leaving royal jelly in the cell, proved to be excellent queens and long-lived.

Mr. Moon related his experience of over 40 years in bee-keeping, which was comical indeed; and he inquired how to make money in bee-keeping.

Mr. H. D. Gates: I believe any one ought to make money in keeping bees. I have kept bees only 2 years, and in frame-hives, but taking bee-keeping in general, year in and year out, it is profitable.

Mr. Hubbard: I have about 100 colonies, but I have not done as well as I ought this season, because of my health. If one expects to make money, he must take care of his bees, and work.

Mr. Page: While talking with another bee-keeper about the pollen theory, he described to me a novel way of cleaning old combs containing pollen which had been in them for years; and as it may be useful to most of you, I will describe it: Take a wash-boiler, or any vessel large enough to contain your combs, and fill it with cold water; put in the combs (one at a time), and take out immediately, continuing this process until the cells are filled with water, then place the combs in the water, and let the water cover them; then fasten them down with a weight, so that they will remain there. Leave them in the water for 24 to 48 hours, or until the pollen is thoroughly soaked up, and then place the combs in the extractor, and the pollen will be thrown out as easily as honey, when the combs will be clean and just as good as new ones.

The rest of the afternoon session was occupied in discussing the wintering question.

Dr. E. H. Danforth offered the use of his office for an evening session to those who could attend.

The association adjourned at 5 p. m. to meet at 8 a. m. the next morning. All who could attend the evening session did so. The topic of the evening was, "Scientific Facts of Queen-Rearing," which was well discussed, and quite interesting.

The convention was called to order on Tuesday, Sept. 2, at 10 a. m., Vice-President Sleeper occupied the chair. The wintering question was then again taken up.

Mr. Page: I think bees ought to be prepared for winter by Oct. 1.

Mr. Everett: I think that bees ought to be prepared for winter now—at least contract the brood-nest now.

Mr. Williams: The amount of honey ought to be considered.

Mr. Hubbard: I have found that those bees which are prepared late, winter poorly.

Mr. Carpenter: I think that bees ought to be put up early to be ahead of cold weather. My bees are kept packed during the winter and the summer.

Mr. Crooker: I have not produced much money from my bees until lately, but I think that they ought to be put up early.

"How many bees should each hive contain to winter well?"

Mr. Babcock: I think that colonies ought to be strong to winter well.

Mr. Page: I think that they are more apt to have diarrhœa if they are very strong.

Mr. Everett: I winter my bees on 6 frames, if possible. If many frames are used, they are liable to get too much cold air in the hives.

Mr. Williams: I have wintered both light and strong colonies, but prefer strong ones.

Mr. Crooker: I contract the brood-nest all that is possible, and use sticks across the frames.

"Should bees be old or young to winter?"

Mr. Danforth thinks that this is a curious question. Mr. Davis thought that it was an indefinite term, but thinks that they should not breed late.

Mr. Crooker: I am not troubled about late breeding. I do not care if my bees do breed late, for they winter just as well.

Mr. Davis: I think poor honey is a prolific cause of poor wintering.

"What is the proper condition in which to winter?"

Mr. Crooker: I do not want any outside packing. I have united colonies in December, and had them winter all right.

Mr. Everett: I think that plenty of bees and not too much food, but enough, are essential to good wintering.

"Which is best for storing, honey or sugar syrup?"

Mr. Everett: Good honey is preferable to sugar syrup, and sugar syrup is preferable to poor honey.

Mr. Danforth proposed the following amendment to the constitution: Any member may withdraw from this Association by notifying the Secretary when all dues are paid. It was seconded and carried.

"Can a locality be overstocked?"

Mr. Page: In the locality where I am situated, in an area 3 by 6 miles, there are over 500 colonies.

Mr. Elkins: For basswood, the locality in which Mr. Page and I live, could not be overstocked; but if we had nothing but white clover, I think it would be.

"Are the best results from those colonies which are wintered on the summer stands, or from those wintered in cellars or bee-repositories?"

Mr. Davis: I have a house for wintering my bees, which I prefer to outside wintering in chaff-boxes. It has 6-inch walls of dry earth, and ventilators to control the temperature. When cold weather comes, I bank up the house all around with snow. I can keep them quiet in cold weather, but when the warm spells come they get uneasy.

Mr. Everett: I want my bees on the summer stands, where I can examine them at any time. It is not cold which kills bees, but poor ventilation is the cause. I use sawdust for side-packing, and forest leaves on the tops.

Mr. Sleeper asked Mr. Davis if his apiary was ever troubled with spring dwindling.

Mr. Davis: Sometimes, but bees generally winter all right.

Mr. Carpenter: I believe that defective ventilation is the cause of poor wintering. I believe there should be a current of air circulating through the hive, but not strong enough to affect the bees.

Adjourned to meet at 1 p. m.

The afternoon session was called to order at the appointed time.

"Is the production of comb honey or extracted honey the most profitable?" The majority of those present were in favor of extracted honey.

Moved and carried that the names and addresses of all of the members of this Association be printed on postal cards and mailed to each of the members. Moved and carried that the next meeting of this Association be held at Cuba, N. Y., on the first Tuesday in May, 1885.

The President asked if any one present had ever tried to fertilize queens inside the hive. Mr. Williams replied that he had, and described the process which was very interesting to all.

It was moved and carried to adjourn at 4 p. m. Sixteen members were added to the roll.

Mr. G. W. Stanley had a smoker and a honey extractor on exhibition. Mr. V. Page exhibited a bee-feeder and samples of light and heavy foundation. W. T. Falconer showed a chaff-hive. W. J. Davis exhibited a comb honey-rack which was different from any described in the BEE JOURNAL. Mr. W. H. S. Grout showed a sample of red-raspberry honey, and Dr. E. H. Danforth had a sample of "honey-dew" on exhibition.

CHAS. E. GATES, *Sec. pro tem.*
H. S. ELKINS, *Pres.*

For the American Bee Journal.

How to Ship Extracted Honey.

C. F. MUTH.

Please let me explain through the BEE JOURNAL how to ship extracted honey. I am getting honey mostly in barrels, half-barrels and kegs. As I handle a good deal in a great variety of packages, I have some experience, and ascribe to myself a certain amount of judgment in the matter. Wishing to be understood by every shipper of extracted honey, I wish to tell things in my own manner, and go into details a little more than I should if these things were of less importance.

A lot of honey arrived here from Shreveport, La., within a few days; 2 barrels had entirely leaked out, while 23 more barrels were more or less damaged. The owner of the above lot happened to be here at the Exposition, and present on the arrival of the honey, which, no doubt, saved some unpleasant correspondence. The honey was in second-hand cypress barrels. A party in Florida, two years ago, sent me two barrels of honey put up in second-hand molasses barrels. These barrels arrived, with a large lot of honey from other parties, but were entirely empty. I admit that the railroad company should not have accepted at the other end, but I am certain that the railroad company here would have succeeded in proving that the fault of the shipper would have caused the damages. The same party shipped again, last year, in new cypress barrels, which were poorly made, as the grooves for the heads were insufficient. Four barrels arrived here entirely empty, and the fifth one had a few gallons of honey left in it. The shipper again was the loser. A party in Mississippi had shipped to us five barrels of honey in good, second-hand alcohol-barrels, out of which about $\frac{1}{3}$ had leaked before there arrival here. The shipper had made the mistake of soaking his barrels with water for several weeks previous to putting in the honey, instead of driving the hoops, or getting his barrels tight by good coopering when they were dry. This should never be neglected when second-hand barrels are used. Have them coopered up securely when they are dry. When, after the rinsing process, one is satisfied that they are tight, they are ready to receive the honey. Honey-barrels never get tight by soaking them in water, because honey, unlike water, absorbs the moisture from the wood.

Common-sense should tell every one that goods worth $30 to $40 should not be trusted to a package worth 40 to 75 cents and shipped any distance. Four to five hundred pounds of honey are worth a good, new barrel, if it can be had, even if it costs $2 or $2.50; and one should see to it that a good cooper made it, and that staves and heads are sufficiently heavy to carry the weight of the honey, no matter if they are made of oak or cypress, if with iron or good oaken hoops.

A barrel of honey rolled through our yard had a pebble pressed clean through a stave. No loss occurred because we saw it in time, but that it did not happen some place else and had the contents spilt, was merely accidental.

In regard to the question whether barrels should be waxed, I answer that I have no objections to barrels being waxed. It is not necessary. But barrels must be tight before they are rinsed, and the honey is put in. This is of vital importance to the producer, shipper and dealer. It may be of interest to some to know that oaken honey-barrels, when emptied, cannot be excelled for wine, cider or vinegar barrels, but cypress barrels should not be used for such purposes.

Honey has again commenced to accumulate, and I request every one not to ship any to me without previous arrangements. I had on hand, one day last fall, no less than 600 barrels of honey. I was overstocked, and I do not wish to have the same occur again this year. No break in the market was caused by me, because I held the honey until the supply was needed. But a reckless shipping to commission houses should be avoided by all who expect to make a living profit out of their product.

Cincinnati, O., Sept. 16, 1884.

For the American Bee Journal.

Bee-Keeping in Nebraska.

A. GIBSON.

My bees are doing well for this country; and are now storing honey very fast. They have been swarming ever since Aug. 15, but I think that they are through now. I have one colony which lost its queen in June, and I have been trying ever since to get them to accept a queen, but they either lose or destroy her every time. I have kept up the colony by giving them brood from another colony. I gave them queen-cells two or three times, and they seem to hatch the queens all right, but by some means they were destroyed afterwards. There were no eggs of any kind laid in the comb. I have had the worst luck that I ever had in losing queens, this summer. I lost 5 colonies during July, on account of the young queens being destroyed and the bees robbing. I have two rows of hives standing about 10 feet apart, and I thought that the trouble might have been on account of the queens being misled. I doubled up the troublesome colony with another one this morning, that had no queen, and I now have 53 colonies all in good condition. I have not taken off any honey yet, but several boxes will be ready to take off during this week. The fall flowers are abundant this season, and if the frost does not come early, we will yet have quite a little crop of honey. A number of my neighbors keep bees, and most of them use the box-hive or log-gum. I scarcely know whether to put my bees into the cellar this winter or leave them on the summer stands. I have a good, dry side-hill for making a cellar; but I do not know which would be the better, cellar or out-door wintering. I send you a leaf of a box-elder tree which is affected by the honey-dew that we have had in this section.

Ponca, Nebr., Sept. 4, 1884.

For the American Bee Journal.

Iowa State Convention.

In last week's BEE JOURNAL will be found the report of the apiarian display at the Iowa State Fair, and also a report of the Convention held at that time during the day. The following is a report of the evening meeting which was held during the Fair:

The evening session was called to order by President O. Clute at the appointed time. All business having been attended to in the afternoon, the evening was spent in the asking and answering of the following questions:

"Is there any foul brood in the State of Iowa?" Foul brood is supposed to have existed for some time in Clinton, Clinton county, and in the neighboring towns, and is steadily spreading and working its way down the Mississippi river, until now it is supposed to exist at Le Claire, Scott County, Iowa.

"Has anybody an idea or method of preventing its spreading?" In Michigan they have a very strict law to prevent its spreading. It requires every one who has foul brood in his apiary to burn the hives in which it exists. I think that it would be advisable to have a committee make out a good Bill in regard to foul brood, and bring it before the State legislature.

"If exposed, will bees carry it to their own hives, if they are in a good condition?" Yes.

"Will some one describe it?" It is so well described in all of the bee-publications that it is useless to describe it here.

"Can a locality be overstocked?" A good many members thought that it could be, and others thought not. After considerable discussion it was left undecided.

"Has any one made a success in planting for honey?" Some thought that it paid to plant for honey, and others thought not.

"Is catnip a good honey-plant?" On some soil it does well, but it is easily choked out by weeds.

"Does it pay to plant buckwheat?" Yes.

"Will it do to sow the buckwheat among the corn?" Yes.

"Will it injure the corn by so doing?" Some who had tried it thought not, and some thought that it would pay to give the farmers so much per acre to sow buckwheat in their neighborhood. To encourage them they might be paid in honey.

"What is the best way to dispose of honey?" Send to some reliable commission merchant. If you send extracted honey, they prefer it put up in barrels, it being a cheaper way to put it up in proportion to the quantity of honey, and quicker to handle, and easier to store away than when put up in small packages. It will net about 9 cents per pound. Always dispose of as much as possible in your home market. For home market put it in small tin-pails.

"Do you ever have trouble by the commission men keeping it on hand very long?" No; the longest time being three months.

"Is it necessary to use separators for comb honey?" Some thought that it was, and others opposed it. So far as profit is concerned it is about equal, as that produced with separators brings a little more in price; but enough more can be produced without separators to pay the difference in price.

"Can virgin queens be safely introduced?" In answer to this question, Mr. O. O. Poppleton read an essay on introducing queens.

After some discussion it was decided that virgin queens could not be introduced with safety at all times; but that fertilized queens could be introduced with certainty.

"Does it pay to supersede a queen when she becomes old?" Yes.

"Does it pay to double up colonies?" Some favored it, and some did not.

Owing to the fact that a large number of the members did not stay on the grounds over night, and that a storm appeared to be brewing, on motion the meeting then adjourned.

WM. GOOS, *Sec.*

REV. O. CLUTE, *Pres.*

Read at the Maine State Convention.

Extracted or Comb Honey—Which?

JOHN REYNOLDS.

I have been a bee-keeper for many years, yet this is my first year's experience in producing extracted honey. My apiary, after recovering from spring dwindling, yielded 410 lbs. of extracted honey, and 1450 lbs. of comb honey, which furnishes a practical answer to the question under consideration.

I find by actual calculation, that on an area of 36 square miles, there was produced last year, about 4000 lbs. of comb honey, (reckoning two pounds of extracted honey equal to one pound of comb honey.) Now, as there are about 18½ inhabitants to the square mile in Maine, this would give 666 as the number of the inhabitants on 36 square miles. By dividing 4000 lbs. of honey by 666, gives a little over 6 pounds of comb honey to each inhabitant in Maine, (taking the year's product on 36 square miles, as a basis of calculation). Now, divide 4000 lbs. by 36, and we have about 112 pounds as the product of one square mile; then multiply 35,000, the number of square miles in Maine, by 112, and we have 3,920,000 lbs. of comb honey as the actual possibilities of production in Maine last year. This at 20c. per pound, amounts to $784,000. Now, as bee-keeping is but in its infancy, and our apiarists unskilled in the application of the science, it is not unreasonable to suppose that this estimate might be doubled. This would give 7,840,000 lbs. as the probable possibilities of Maine's yearly honey crop.

Now then, as we usually get two pounds of extracted honey to one pound of comb honey, we shall have, if we run wholly for extracted honey, 7,840,000 lbs. of extracted honey, as the actual possibilities of Maine this year, or 224 pounds per square mile. We find 6 pounds of comb honey as the amount annually allotted by nature to each inhabitant of Maine, in our present knowledge of the science. Are we satisfied with this small allowance of 6 pounds of comb or 12 pounds of extracted honey? We cannot have both, and thus it remains for each one individually to decide which he shall produce, comb honey or extracted honey.

I find, by talking with quite a number of grocers, that the market demands comb honey in their immediate vicinity. I find, also, by reading some bee-papers, that the market demands comb honey and that its production is setting strongly in that direction. Mr. T. G. Newman in his work "Bees and Honey," says; "To-day comb honey is the preference for table use; and if we would cater to the public want, we must put that article in its most attractive shape." In regard to extracted honey, he says, "none but a thoroughly good article should be produced and placed upon the market, as the price depends on its quality;" and further, "a good article of extracted honey has excellent qualities, which when well known will commend it to all consumers, and is equal in every respect to the best comb honey."

"Every bee-keeper should fully supply his own locality, and he should let it be distinctly understood that it is the pure honey, taken from the combs by centrifugal force; that nothing is added to it and nothing taken from it, except the comb; that it is not the old-fashioned "strained honey," which was obtained by being taken from dead bees, pollen, mashed brood, etc., but that it is the pure liquid gathered from the flowers, which will give health to the body, force to the mind, and strength to the intellect of those who eat it."

"The fact should be known that granulated honey can be reduced to its liquid state in a few moments, by placing the jar containing it in warm water. When thus liquefied, it so remains for some time before again crystallizing. Consumers may be sure of a wholesome article by purchasing granulated honey and reducing it." I was shown a jar of honey in the liquid state which had been thus liquefied for two years since it was reduced from the granulated state.

I find that grocers are willing to take comb honey in limited quantities, but have a decided objection to extracted honey. Why is this so? One grocer told me that there was a decided prejudice against extracted honey in his locality. Another grocer took fifteen jars on commission and said that he did not know whether he could sell it, but would try. I saw him the other day, and he had disposed of ten jars of it at the same price as comb honey; and he said that his customers liked it.

But another says, "How much do you ask for your comb and extracted honey?" "I wholesale comb honey at 20 cents and extracted at 12 cents per pound." "What is wax worth?" "32 cents." "About how much wax will a pound of honey yield?" "Oh, perhaps an ounce, more or less."

The grocer looked thoughtful a moment and turned away without comment, as comment to his mind was unnecessary. The fact was, the whole thing smelt of adulteration to him and we had given him the figures with which to prove it. But his actions spoke louder than words, "you bee-men sell us honey in the comb for 20 cents. When you go to the trouble to extract other honey and sell it for 12 cents, when you might have had 20 without extracting, and the ounce of wax you sell for 2 cents more, making your pound of extracted net you only 14 cents, when we would have been glad to have given you 20 cents for it in the comb!"

And when we try to explain by telling him that we use the comb over again in the hive, and that it costs in honey nearly two-thirds as much to make the comb as the comb holds, then he is puzzled again, and when the question is put, "Sir, will you have some of our extracted honey, to-day?" he first looked thoughtful, then wise, then turned away with a shake of his head or a "no I thank you," as much as to say, "maybe what you say is true, but this bird is not to be caught with chaff a second time."

I saw at once that my chance to get twenty cents for my extracted honey was fully as good, if not better, than to get a less price, and as the cost of creating a market was quite an item, I then resolved to put comb and extracted at the same price hereafter.

To those who are now using an extractor and know what you can do, I would say, do not make much change, unless you can do it for the better sale of your honey. To those who have not yet gone into it, I would say, "don't," or not largely, unless you have the brain force to create your own market and maintain it by square, honorable dealing.

☞ The Cedar Valley Bee-Keepers' Association will hold its second annual meeting in Beckley's Hall, South Side, Waterloo, Iowa, on Oct. 1 and 2, 1884. Reduced rates over the different railroads. All interested are cordially invited to attend and make this one of the best meetings in the State.

H. O. McELHANY, *Sec.*

For the American Bee Journal.

Controlling Increase, etc.

G. W. DEMAREE.

It is not my purpose to "moralize," as the manner of some is on such occasions as this. Let the past with its successes and failures suffice us. It is with the present and future that we have to deal. It is enough to say that the past honey season has not been satisfactory to most of us.

The flow of nectar from white clover was marvelously profuse, but the period was too short to give a full crop. Many of us made the mistake of laying our plans too broad for the short harvest, which we did not anticipate. I, for one, have learned something in that direction, and from that experience. Hereafter, I shall work my bees for what is in sight, and broaden my plans if the occasion demands and justifies it.

I wish to call your attention to the fact that many persons begin to talk and write as though bee-culture, as a science and as a practical industry, has reached the top round of the ladder. Let no one be deceived by the exhausted ideas of such. I am willing that it shall go to record when I say here, that the present mode of handling or manipulating bees and bee-implements, in short, the present system of bee-keeping, which we proudly call the "modern system," will, in the near future, be revolutionized and made a thing of memory only.

There is no question, pertaining to apiculture in the South, of so much importance as that of controlling increase. In the North, where long, cold winters hold the "balance" with the grip of death, it is well enough to say, "let the bees swarm." With us, bees succumb to nothing but the expiration of the lease of life, or straight-out starvation. Not a fatal case of the disease known as dysentery or diarrhœa, in the North, has ever come to the knowledge of the writer, in all Central and Southern Kentucky. Most of us have seen bees with distended bodies when confined to the hives unusually long during unusually cold winters; but a single flight in the open air is all that is necessary to restore them to a normal condition. The Southern apiarist smiles at the conceit of the pollen and hibernation theorists. Our bees gather pollen eight months in the year, and "snap their fingers" at pollen chimera.

As to the "sleepy-headedness" of bees: In January, 1881, my bees could be seen either on the wing or stirring about the entrances of the hives every day but three in that month. They wintered well without sleep (?). Why, sirs, if I should follow the advice of some who say, "let the bees swarm," my apiary would multiply to 2,000 colonies in four years, provided that I would covenant to let none of them starve!

In the light of these facts, any system of management that does not put the matter of increase entirely at the disposal of the apiarist, needs improvement, and is sure to be improved. It occurred to me years ago that if queenless bees could be employed to produce honey, the problem would be solved; and, now, after experimenting considerably in that direction, I am prepared to say that I can control increase by employing queenless bees to gather my surplus crop of honey; and in order that others may aid me in perfecting the new system, I will here give you a description of the practical working of the plan:

In the early part of the honey season, the surplus cases are adjusted on the hives in the usual way, and "further proceedings continued" till the colonies show signs of swarming. I then move the old hive from its stand and put a new (or empty) hive in its place, and fill up the new hive with empty combs, one of which must contain some larvæ just hatched from the eggs. The case or cases for surplus honey are now lifted off of the old hive and set, with all the bees in them, on the new hives. You now look up the queen and put the combs in which she is found, in your comb-box, and then proceed to shake the bees from the combs into the old hive right in front of the new one, having first provided a slanting board to lead the bees to the entrance. Place the combs back in the old hive, to which add the comb with the queen, and set the old hive at right angles with the new one. It is best to spread a cloth over the old hive to disguise it for a day or so.

It will be seen that the new hive contains nearly all of the field workers, and a large portion of the young bees for comb-builders, while the old hive has all the brood with the queen, and enough workers and nurses to push forward brood-rearing.

The bees in the new hive will start queen-cells and gather honey with the greatest rapidity. In five or six days we begin to turn the old hive, a little at a time, so as to stand close by the side of the new one, bringing the entrances of both hives, practically, together. At the expiration of ten days—if the honey season continued good—the old colony will be strong enough to spare additional working force to the honey-producing colony in the new hive; and to accomplish this, all we have to do is to turn the old hive back to its former position, at right angles with the new hive, at a time when the bees are in the fields in full force, and as they come home loaded, they will enter the new hive and recruit its failing strength.

Of course the queen-cells must be removed, and freshly-hatched larvæ given in their place. When all danger of swarming is over, the old hive is brought in line with the new one, and the bees are united by "tiering up" the new hive on the old one, and thus the honey-harvest is finished up by the united colony.

It will be noticed that I speak of employing two hives for each colony, which I distinguish by the terms "new" and "old." Well, now I propose to dispense with the extra cost of the "new hive," and in its place use the supers or surplus cases adjusted on a recess bottom-board. When running a colony for comb honey, I will work a case of shallow extracting-combs on the recess board, and underneath the section-cases, to catch the pollen, if any is brought in.

My recess bottom-boards are made just the width of the hive 1 use, and two inches longer. A strip of wood ⅜x⅞ of an inch is nailed to three sides of the board to give "bee space" under the cases which rest on the elevated rim formed by the strips of wood. The extra two inches in the length of the board is for an alighting-board.

I have now given my new system of controlling increase — suppressing swarming, if you prefer the terms, and producing honey with queenless bees. Of course there will be much criticism. A large minority of bee-culturists have always refused to accept anything "new" until they have added some "improvement," worthless though it may be, to the new improvement or device. I do not object to this. Many fine inventions have been born of absurdity.

Christiansburg, Ky.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Strange Noise in a Bee-Hive.

Every afternoon for the last two weeks I have heard a noise in one of my strong Italian colonies, which sounds exactly like a boy blowing in an empty vial or bottle. When I first heard it, I thought that was what it was, but my wife said it was in one of the bee-hives, and upon examination I found that she was correct. It can be heard 80 feet from the hive. What is it? J. N. SMOOT, M. D.

Fulton, Ky., Sept. 9, 1884.

ANSWER.—I will give up this puzzle before I attempt an answer. I have had no experience in any such case, and you being on the ground, are best able to get under the cause of the strange phenomenon.

The Purity of Drones.

In the Texas Bee-Keepers' Convention, the report of which was published in the BEE JOURNAL, I find this as one of the questions discussed: "Are drones from an Italian queen that has mated with a black drone, pure Italians?" The committee having the question under advisement, reported "yes;" the convention dissented. As it is a matter of vital interest to all beginners in bee-keeping, I had hoped that some of the "lights" would have noticed the theory. If the queen, unmated, can produce the drone, the Italian queen the Italian drone, why may she not have the power to do the same when impurely mated? With me this is no idle question. I am trying to Italianize my apiary, and I have but 4 pure queens, and 20 pure ones but unpurely mated. After a protracted drouth of some 4 months, my bees are now on a "boom" on the second bloom of the Brazil or red-wood. I extracted about 400 pounds of honey last week, making in all, thus far, some 2,000 pounds. If the Brazil holds out another week, I will have a full extracting from my 70 colonies. Heretofore I have only extracted from 30 colonies. I will report when the season is over. JNO. A. EMISON.

Missouri Valley, Tex., Sept. 5, 1884.

ANSWER.—The best I can do in answering the above, is to say that Dzierzon and many other students of entomology have declared the same as the "committee" to which you refer. Several of our leading apiarists have observed what induced them to believe that the drones of a pure queen which was impurely fertilized, were not pure. I do not consider myself yet decided upon that subject. As yet I have never seen any thing to warrant me in believing that the great naturalist, Dzierzon, is mistaken in his theory, though such men do sometimes err.

Killing Bees.

Your answer to my questions about the killing of the little black bees, is wide of the mark. It is now 26 days since I first noticed the killing of them, and they are still at it. Nearly all the oldest and most experienced bee-keepers in this vicinity have seen them, and all agree that they have never seen anything like them. The black bees do not work, and that, I think, is the reason they kill them. Sometimes the workers get so much excited about it that they kill each other. I opened the hive yesterday and found plenty of brood. This was my strongest colony, and I have taken 185 pounds of comb honey from it this season. Can you not give another guess, as I am still in the dark?

H. J. NORTHRUP.

Lansingburg, N. Y., Sept. 5, 1884.

ANSWER.—I shall have to give up your peculiar conundrum, for I, too, have never seen any thing like it.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

SELECTIONS FROM OUR LETTER BOX

Delightful Weather for Bees.

We are now having very hot days and warm summer evenings. It is the best fall for bees to gather honey that we have had for some years. Yesterday the bees returned from the fields by the thousands, before the showers came. The air seemed not like September—but we are liable to have almost any thing up here, yet more apt to have early frosts than such delightful midsummer-like weather as we are now enjoying.

JNO. MORRIS.
Mauston, Wis., Sept. 11, 1884.

Only One-Half a Crop.

We are now in the midst of goldenrod bloom, and the weather is splendid for bees to gather honey from it. We need it too, as bees have not gathered any surplus honey since July 3. I am now looking over all of my colonies, and examining their condition, and those which have combs to spare I take them and give them to those that are in need of any. This is a good time to open the hives, as there is no danger from robbery. We can count this year's honey harvest only half a crop.

WM. BOLLING.
Dunkirk, N. Y., Sept. 8, 1884.

Blue Vervain.

Enclosed, find specimen of plant, which please name through the JOURNAL. It yields a good deal of honey and of fine flavor. It grows on low, wet land and from three to five feet high, with a great many branches.

Wyoming, Iowa. J. E. HUNTER.

[This is the blue vervain, *verbena hastata*, which has been very often described as an excellent honey-plant. —T. J. BURRILL.]

Report for 1884.

I commenced to extract honey on July 2, and finished on Aug. 11. My average is 237 pounds to the colony. Both bottom and top-boxes are full now for their own use. My whole crop was put in 5-gallon tin-cans. I used new cans and cases, and sold my honey, delivered at the depot, at 6½ cents per pound. Twelve tons was the amount of my crop.

J. E. PLEASANTS.
Santa Ana, Calif., Sept. 12, 1884.

Best Season for Several Years.

The honey crop of this vicinity is the best that we have had for several years. White clover yielded a surplus of 25 pounds per colony, which was good in view of the empty condition of the hives at the opening of the season. Sweet clover was abundant in blossom, but produced but little honey. Buckwheat was the great crop, and with favorable weather a large crop of honey has been produced; yet a near neighbor who put on boxes at the close of the clover bloom, and let the weeds grow over his hives until they could hardly be seen, has received no surplus, and thinks that "this has been a very poor season." We have never had any honey-dew, but an abundance of pollen; yet with loss in wintering not exceeding 1 per cent., our bee-keepers feel no alarm about the pollen theory.

Athens, Pa. D. F. PARK.

Not One Pound Per Colony.

This region of country is nearly a total failure, so far as a honey crop is concerned. My apiary will not average one pound to the colony. No honey was secreted in the flowers. All of our hopes are blighted this year. J. W. MARGRAVE.
Hiawatha, Kans., Sept. 17, 1884.

Bee-Keepers' Meeting.

We had a very pleasant and profitable meeting at Purdue College on Tuesday, Sept. 2, with President Dr. L. Snyder in the chair. Our next meeting will be on the first Saturday in October, at which time we shall discuss several subjects of much interest to bee-keepers. We cordially invite all who have an interest in the "faithfull little workers" to be present at 1 p. m. on the appointed day, at Purdue College, Lafayette, Ind.

J. M. HICKS.
Battle Ground, Ind.

Crop Almost a Total Failure.

The honey crop in this part of the country is nearly a total failure. From 75 colonies, spring count, I have increased to 120, and while the most of them have ample stores for their own winter use, I have not yet taken 200 pounds of surplus honey. Some of them are now working quite lively in the sections, but I cannot hope for much honey, because of the lateness of the season. We are having our July weather in September.

J. R. BAKER.
Keithsburgh, Ill., Sept. 10, 1884.

Marshall Co., Ia., Honey Show.

The Apiarian Department at the Marshall County Agricultural Fair was a grand success for a beginning. The exhibition of bees and honey was quite large, although the premium list was not all represented. It was one of the most attractive features in the Floral Hall, and was viewed by hundreds of inquisitive spectators. The display of comb and extracted honey was grand and beautiful to behold. But one colony of bees was exhibited in an observatory hive. Mr. S. W. Myers had a fine display of queens, so that they were easily seen by spectators, many of whom had never seen a queen bee. Mr. Koefer, on the third day of the Fair, brought a fine bouquet of honey-producing flowers in bloom, consisting of 22 varieties, and all properly labeled, which was interesting to examine. The honey-extractor was a novelty to many. Several supposed it to be a "refrigerator" of some kind, but a little explanation changed their minds. The following are a few of those who received premiums: Best colony of bees, S. W. Myers; largest display of queen bees alive, S. W. Myers; largest and best display of comb honey, G. W. Keeler. Mr. Keeler also received the first premium on the best display of extracted honey, and best sample of comb honey not less than 10 pounds. Largest and best display of samples of different kinds of honey, S. W. Myers. The general feeling with our bee-men, and bee-women, too, was to try to do better next year. The display seemed to add a new zeal to apiculture, and many bee-keepers were led to inquire when the next county bee-keepers' meeting would be held, for they wanted to attend. The Marshall County, Iowa, Bee-Keepers' Association will meet at the Court House in Marshalltown, Iowa, on Saturday, Oct. 4, 1884, at 10:30 a. m. Subjects for discussion, "Fall care and winter care of bees."

J. W. SANDERS.
Le Grand, Iowa, Sept. 18, 1884.

Goldenrod.

Please give the name of the enclosed flower and its value as a honey-plant. It grows around here in large quantities, and bees leave buckwheat for it. H. HERRICK.
Grand Rapids, Mich., Sept. 16, 1884.

[It is goldenrod, and is an excellent honey-producer.—ED.]

Worst Season for 10 Years.

We have no new honey this year, and all of the old honey is gone. I have 80 colonies of bees, and not five pounds of honey. One man had a little early honey at the Fair, and he will have to feed that back for winter. We have less honey this year than for ten years past. Cannot some one send us enough for a taste when company comes? R. C. AIKIN.
Shambaugh, Iowa, Sept. 15, 1884.

Convention at Chicago.

☞ The Northwestern Bee-Keepers' Association will hold its fifth annual convention at Owsley's Hall, northwest corner of Robey and West Madison streets, Chicago, Ill., on Wednesday and Thursday, Oct. 15 and 16, 1884, commencing at 10 a. m. on Wednesday, and holding five sessions. Those who have attended one of these annual re-unions will need no urging to induce them to come again; those who have not, should remember that Father Langstroth characterized the last meeting as "representing the largest number of large, practical and successful honey-producers of any convention that he had ever visited." This meeting being held during the Inter-State Industrial Exposition, reduced railroad fares may be had on nearly all of the railroads. W. Z. HUTCHINSON, *Sec.*
C. C. MILLER, *Pres.*

Special Notices.

The Bee Journal for 1885.

$25.00 Cash Premiums.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

◆

TRIAL SUBSCRIBERS.—The Weekly BEE JOURNAL will be sent to any *new* subscriber in North America from now until the end of 1884 for 30 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

◆

☞ The Tuscarawas County Bee-Keepers' Association will hold its next meeting at the apiary of Geo. F. Williams, in New Philadelphia, O., on Thursday, Oct. 23, 1884.

G. F. WILLIAMS, *Sec.*
A. A. FRADENBURG, *Pres.*

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

150 Colonies of ITALIAN BEES
FOR SALE.

They are in Langstroth portico-hives, with standard L frames. All in first-class condition, with from 20 to 30 pounds of good honey for winter. The combs are all straight and all worker, and are built mostly on wired frames. In lots of 1 to 10 at $4.50 each; 10 to 25 at $4,25 each; 50 or more, at $4.00 each.

G. H. SHIBLEY.
39A4t Richmond, McHenry Co., Ill.

Land-Owners, Attention!

All persons who have lost Real Estate in Iowa, by reason of TAX OR JUDICIAL SALES, are invited to correspond with **HICKEL & BULL**, attorneys at Law, 41 First Ave., **Cedar Rapids, Iowa**, and they will learn something to their advantage.

PURE HOLY-LAND QUEENS.

Howard's importation of Holy-Land Queen are the only pure queens of this race in this country. We have 2 of the finest queens that Mr. H. imported, and will have by Sept. 15, 100 young queens from them. They will be fertilized 3 miles from all other bees, and we guarantee them to be equal in every respect to the imported queens. Price, $2.00 each. A copy of the Bee-Keeper's Handy-Book or one of our combined Queen and Drone Traps will be given with each queen. We can send you as fine Italian or Albino queens as can be purchased in the world. Warranted queens, $1.00 each; tested, $1.50; select-tested, $3.00 each.—Secure your breeding-queens for another season.

37A4t HENRY ALLEY, Wenham, Mass.

BEES FOR SALE.

I offer HYBRID BEES for Sale in Langstroth or other hives, with 30 lbs. of good honey for wintering. Price, $4.00 per colony. R. S. BECKTELL.
37A3t Three Oaks, Mich.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

LOCAL REPORTERS WANTED.

We want an agent and local reporter in every community to represent **City and Country,** and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
24A18t

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
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Apply to **C. F. MUTH,**
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Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
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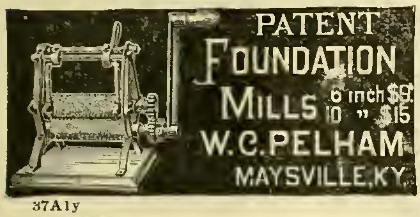

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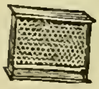

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Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

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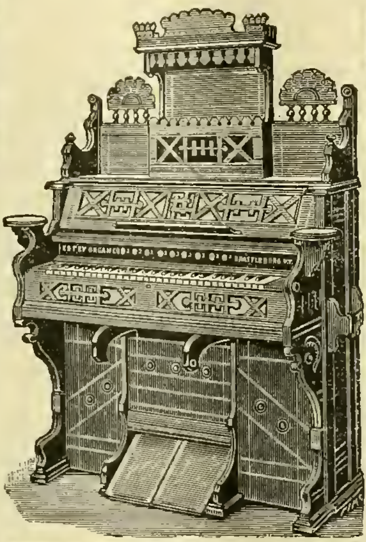

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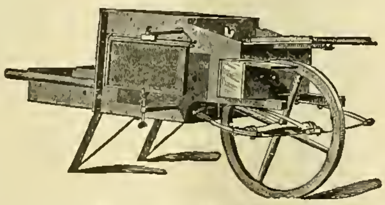

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Price, complete, only .... $18.00.

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HIGH-GRADE QUEENS.—In closing the Queen trade for this year, I have some fine high-grade "business" Queens, which will be sold for **40 cents** each. Fine breeding Italian stock for sale. G. W. DEMAREE, Christiansburg, Ky.

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65 *ENGRAVINGS*

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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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1868. 1884.

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WAX ON SHARES,

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Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

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I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

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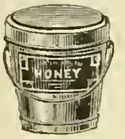
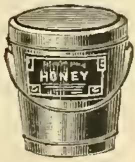
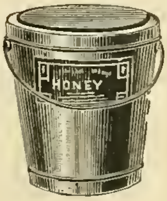


NEW

HONEY PAILS



The accompanying illustrations show a nest of pails with the sides tapering, for marketing extracted honey. The covers are deep and the pails are made with special reference to filling them for the retail honey-trade. They are made in a superior manner and are quite attractive in appearance, when filled and nicely labeled.



	4 lb.	7 lb.	13 lb.
Per doz.	$1.25	$1.60	$2.00
Per 100	8.00	10.00	14.50

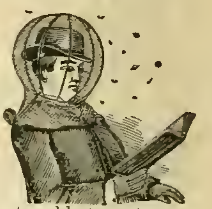
A. H. NEWMAN,
CHICAGO - - ILL.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf J. VANDERVORT, Laceyville, Pa.

A NEW BEE-VEIL



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

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923 West Madison Street, Chicago, Ill.

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When Catalogue and name of nearest dealer, where our SUPERIOR Vehicles can be seen, will be sent.

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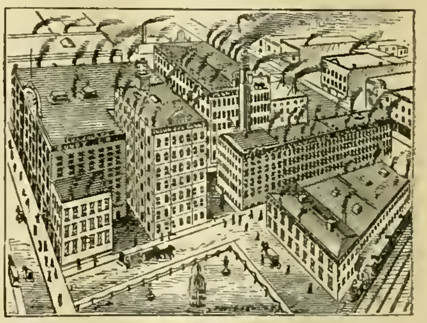

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the latter most perfect and free from horse motion.

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Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of travelling in that country with ostriches as a motor. 24A18t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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OLDEST BEE PAPER IN AMERICA

THE WEEKLY

BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., October 1, 1884.

VOL. XX.—No. 40.

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **50 cents.**

Entered at the P.O. as Second-Class matter.

TO CORRESPONDENTS.

The Subscription Price of the Weekly BEE JOURNAL is **$2.00** a year; and of the Monthly, **50 cents** a year in advance. New Subscriptions can begin at any time.

Club Rates for the Weekly are: $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

Club Rates for the Monthly are: two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70: five copies for $2.00; more than five copies for 40 cents each.

Sending Money.—Remit by Express, Post Office Order, Postal Note, or Bank Draft on New York or Chicago. If neither of these can be obtained, Register your Letter, affixing stamps both for postage and registry, and take a receipt for it; or send it by Express. Money, sent as above described, is AT OUR RISK, otherwise, it is not. Do not send checks on local banks, which cost us 25 cents each, at the banks here, to get them cashed.

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Subscription Credits.—The receipt for money sent us will be given on the address-label of every paper. If not given in two weeks after sending the money, write to us, for something must be wrong about it. Do not wait for months or years, and then claim a mistake. The subscription is paid to the END OF THE MONTH indicated on the wrapper-label. This gives a continual statement of account.

Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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Look at Your Wrapper-Label.

X SUBSCRIBERS whose papers reach them with this paragraph marked with a *blue* pencil, will please take notice that their *subscriptions will expire at the end of the present month.* Such are marked thus on the label, "Oct 84." We do not want to lose any of our subscribers, and give this notice so that all may get every number of the BEE JOURNAL without any break, and no papers will be missed. When the money for renewal is received at this office, the date on the label is changed to correspond, and this change is your receipt. If there is any mistake made, notify us at once.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* **7** words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, **50** cents per line.

Advertisements may be inserted one, two or four times a month, if so ordered, at **20** cents per line, of space, for each insertion.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

TO CORRESPONDENTS.

Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

To Canadians.—We take Canadian money for subscription or books; and Canadian postage stamps may be sent for fractions of a dollar.

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George Neighbour & Sons, London, England, are our authorized [illegible] for Europe.

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CHAS. HERTEL, Jr., Freeburg, Ill.,
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E. L. ARMSTRONG, Jerseyville, Ill.
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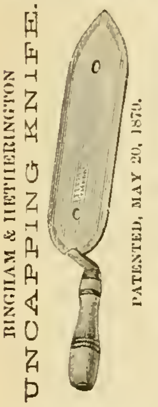
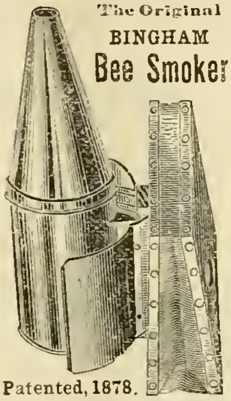

BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already eceived for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

Prices, by mail, post-paid.

Doctor smoker (wide shield)	3½ inch	$2 00
Conqueror smoker (wide shield)	3 "	1 75
Large smoker (wide shield)	2½ "	1 50
Extra smoker (wide shield)	2 "	1 25
Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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6A2Btf **ABRONIA, MICH.**

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Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, **5** cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.— By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., OCTOBER 1, 1884. No. 40.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Death of Mr. D. S. Given.

Mr. D. S. Given, the inventor of the Given Foundation Press, died in Los Angeles, Cal., on July 10, where he went in November 1881, hoping to regain his health. He was born in Muskingum County, O., Dec. 22. 1843, and removed to Illinois in 1864. In 1866 and 1867 he was secretary of the Freedman's Bureau. In 1868 he married Miss Hill, of Pennsylvania, who has survived him; they had one child. His partner in business is Mr. J. R. Caldwell, who, in company with the widow, will hereafter carry on the business, as will be seen by a notice on page 638.

◆

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly BEE JOURNAL for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

◆

☞ Urge the store-keeper to whom you sell your honey to keep it in view. People seldom go to a store expressly to buy honey; they are induced to do so by seeing it on the counter or shelves. The neater and nicer it looks, the quicker and better it will sell.—*Texas Ranch.*

◆

☞ Convention at Chicago, Oct. 15. It promises to be a very interesting re-union of the bee-men of the West.

◆

☞ The Northern Michigan Bee-Keepers will hold a Convention at Greenville, on Oct. 6 and 7. The notice did not reach this office, until the forms were all made up. We squeeze in this item.

Bee and Honey Show in Indiana.

The Porter County, Ind., *Vidette*, gives the following items about the display of honey at the Fair:

It is only a few years since bee-culture has taken a prominent part in the products of the land called Indiana. The old-fashioned bee-hunting, where a man's trowsers was in constant danger in climbing in search of honey, with a fair chance of meeting Mr. Bruin to dispute the way, has been done away with, and but an occasional land-mark is found of ye olden times. Porter county, as well as portions of the State, are progressive; and among the exhibitors at the Fair we notice T. S. Bull & Sons, who have a fine exhibit of honey from their apiary, five miles north of the city. They have 200 colonies of bees, and the products of the year are 1,200 pounds of comb, and 10,000 pounds of extracted honey.

Another exhibitor in the bee-department, is Dwight Furness, of Furnessville. He has a large number of colonies, and his specialty is comb honey. He has a fine exhibit, and a new idea he shows is in pound packages enclosed in a neat paper basket which makes a neat package for dealers to handle.

◆

MARRIED.—In Cleveland, Ohio, Sept. 18, 1884, by the Rev. William Gaston, pastor of the North Presbyterian Church, at his residence 1083 Superior street, Alfred J. Fisher and Miss Lora M. Kinsey, both of East Liverpool, Ohio.

The BEE JOURNAL acknowledges the receipt of a box of wedding cake, and wishes the happy pair all the joy they wish themselves. Mr. Fisher has been a correspondent and subscriber to the BEE JOURNAL for years, and is well-known to our readers. Last year he argued, on page 108, that "more honey would be stored without than with separators." Acting upon this idea himself, he has concluded to allow nothing to separate him from his Lora, and both may now be expected to fill their hive [home] with honey [sweetness] unalloyed and unadulterated—beginning with the "honey-moon," and ending with life's journey.

Bees at the Iowa State Fair.

The *Times*, a paper published for the Fair, has the following items relative to the Bee and Honey exhibit of the Rev. O. Clute:

A very interesting display was that of Rev. O. Clute, of Iowa City, consisting of fine extracted honey, and also of numerous glazed cases showing different kinds of bees.

Hon. Thomas B. Wales, came from Iowa City with a magnificent herd of thorough-bred Holstein cattle, his party consisting of himself, daughter and son, the Misses Nellie Younkin and Edith Shipley, of Iowa City, and the Rev. O. Clute and his two assistants in the apiary display. This happy family had at their disposal two large wall-tents, subdivided into reception room, dining hall, boudoirs, sleeping apartments and kitchen, and lived *al fresco* in most luxurious style. A *Times* artist has attempted the portrayal of their canvas home. That the young ladies can prepare an excellent picnic dinner, another *Times* representative will testify.

The engraving shows the family tent to good advantage. They must have had an enjoyable time.

◆

Bees Gathering Honey.

The Kansas *Bee-Keeper* gives the following rules to indicate to novices when bees are gathering honey from the flowers:

In giving instructions for general management in the apiary, the expression, "when the bees are gathering honey from the flowers," is often used, and the question is almost as often asked by the novice in bee-culture, "How am I to know when my bees are gathering honey from the fields?" The experienced bee-keeper judges of this by the action of the bees in and around the hive. The novices may judge with equal certainty by the following test: place a little honey or sugar syrup in the open air, if it is quickly found and carried away by the bees, we may safely judge there is no nectar being secreted in the flowers; but if it remains untouched a greater part of the day, we may know that at such times there is a plentiful flow of honey from the flowers, which engages the attention of the bees.

Death of Mr. John Madden.

The Davenport, Iowa, Daily *Gazette* of Sept. 20, contains the following notice of the death of one of the prominent bee-keepers of Iowa:

On Sept. 19, 1884, occurred the sudden death of Mr. John Madden, in Winfield township, near Long Grove, Iowa.

The news of Mr. Madden's death soon spread through the country, carrying sadness with it; for having lived here for 30 years, he was well-known, and had the respect and confidence of all his friends.

At about 6 o'clock on Thursday evening, the deceased was driving with a single horse and buggy from Donahue to Long Grove, when the horse becoming frightened at some children trying to get a bed-tick over a fence, ran westward until it came to the house of Henry Madden, brother to the deceased, where it entered the yard. During the run Mr. Madden had been thrown from the buggy. Mr. Henry Madden hurried back along the road, and at its side found his brother lying dead; his whip in his hands, and the lap-robe wrapped about his legs.

There was no evidence of intended violence, but death had apparently resulted from concussion of the brain. The jury returned a verdict "that the deceased came to his death by being thrown from his wagon, his horse having been frightened."

Mr. John Madden was born in Wigton, England, on Aug. 8, 1817, and came to the United States in 1850, landing at New Orleans and ascending the river to Davenport. He purchased land in Winfield township, out of which he soon made a farm, and has occupied it as his home ever since.

Mr. Madden has always been an enterprising citizen, with a heart full of kindness, and possessing good judgment in all business transactions. He has for a great many terms of the District Court been foreman of the grand jury. He always took great interest in public affairs, and was a member of the Scott County Agricultural Society from its foundation. He leaves a wife and eight grown-up children.

The officers of the Eastern Iowa and Western Illinois Bee-Keepers' Association have sent us the following for publication:

Mr. Madden was a successful and progressive apiarist, and one of the first to help organize what is now known as the Eastern Iowa and Western Illinois Bee-Keepers Association, and until the time of his death, he was always an active member of this Association, and many who attended the annual meetings of this Association, and there made his acquaintance, will receive with profound sorrow the news of his untimely death. The esteem in which the deceased was held, was demonstrated by the fact that 225 vehicles (10 of which held bee-keepers) followed the remains to its last resting place. The members of this Association express their heartfelt sympathies with Mrs. Madden in her great bereavement.

Wm. Goos, *Sec.*

I. V. McCagg, *Pres.*

Transferring Bees at a Fair.

A Philadelphia paper gives the following account of public manipulations with bees in the bee-tent at the Fair in that city:

The bee-tent at the Fair was the scene of a remarkable entertainment yesterday afternoon. Mr. Arthur Todd gave an exhibition of the method in which bees are manipulated. Quite unprotected by head-net or gloves, he opened a box-hive full of bees, took out the comb and transferred it to a new hive. He carefully sliced off the coverings of the cells, and, placing the comb in the extractor, emptied them of their sweet contents. He sought among the crowded colony for the queen-bee, and having found her, showed her to his audience, who were safely standing outside his gauze tent, then deposited her in a little wire cage made expressly for her, introduced her in a polite manner to her friends, and put her into the handsomely furnished hive, which he had prepared for her reception.

Mr. Todd handled the little insects as if he were ignorant of the fact that they all carried a very ugly weapon, and he appeared to be on terms of affection with them all. They crawled over the bald part of his head, swarmed on his hands and arms, and got caught in his beard, but they seemed to think it was all play, and he appeared to enjoy the fun. The astonished visitors looked on with mute admiration as he lifted a frame of comb from the box-hive and showed them the eggs in some cells, the honey in others, and again others covered with the curious waxy substance the bees gather.

In the gauze tent with Mr. Todd were Mrs. Louisa Thomas, of Tacony, one of the earliest practical bee-keepers in this country; Mrs. Foote, of New Haven; Dr. Townsend, President of the Philadelphia Bee-Keepers' Association; John Shallcross, of Frankford, and John Pyewell, an enthusiastic bee-keeper from Bridgeport, Pa.

"Bee-keeping," said Mrs. Thomas, "is one of the most absorbing employments. Bee-keepers become so interested in their work that any trouble that may attach to the care of an apiary is completely overlooked in the pleasure it gives. This exhibition is, without exception, the very best I have ever seen, both as regards the bees and the honey. The whole work of transferring a colony of bees from one hive to another only occupied 40 minutes."

Arthur Todd has been awarded six prizes for his honey and bees, and will receive a special award for his clever manipulation of his busy little favorites.

Honey and Beeswax Market.

Office of The American Bee Journal, }
Monday, 10 a. m., Sept. 29, 1884 }

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c. on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX—Is dull at 26@28c on arrival.

C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11½@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY.—No movement of consequence. Stocks are of fair proportions, but are in some instances limited to figures not obtainable. Choice extracted is in demand at the quotations below noted. White to extra white comb, 9@11c.; dark to good, 7@9c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 25@28c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market seems to be improving, so that there is a larger demand. Best 1-lb. sections were sold in quantity at 16c; in a small way 17c is occasionally obtained, but 16c would be the more reliable quotation; 2-lbs., best white, 14@15c; second quality slow at 10@12c. Extracted slow at 8@9c.

BEESWAX—30c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY.—There is no change to report. The demand is good with liberal receipts and prices at about last quotations, with some concessions in round lots. Choice Eastern comb, ½-lb. sections, 18c.; 1-lb. 16c; 2-lb. 15c. California comb, 2-lb. frames, 15c. Lower grades, move slowly, at 2 or 3c. less. Extracted, 6½@8c. according to quality. We could use a few thousand pounds of choice white clover extracted, in barrels, and will be pleased to receive consignments or will purchase outright as much as 5,000 lbs. at a reasonable price.

BEESWAX.—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

CORRESPONDENCE

For the American Bee Journal.

Doolittle's Report for 1884.

G. M. DOOLITTLE.

Not long ago I received a letter from one of our most prominent bee-keepers saying that his yield of honey was very light. "In fact," said he. "it is so light that I shall not report at all." If he had added that he had never reported except once, that being a few years ago when he had secured almost the largest yield of honey on record, he would have given a truthful statement. This bee-keeper is not an exception by any means, for we have many others who never report except when they can report a *very large* production. In this way the showing in our bee-papers and elsewhere is very largely on the bright side of bee-keeping; for these large reports are copied into nearly every paper in the United States, and perhaps of the world, as was the large report above referred to.

Our bee-keepers have been severely criticised by selfish apiarists for their giving these large reports, who argue that such reports are given by the editors for the purpose of enticing others to enter the ranks of bee-culture, thereby giving these papers a larger patronage, and enabling the editors to sell a larger bill of supplies; which thing is claimed to be for the interest of the supply dealer, and against the producer's interest. It is not my desire, at this time, to argue this point; for, be that as it may, I claim that it is the bee-keepers who are to blame (if there is any blame) for only this bright side of bee-keeping being given. If every bee-keeper should give a report, only in years when they secured but a small crop, or none at all, the thing would be reversed; or if, as some claim, that the editors of the different papers would not publish reverses, then no reports at all would be given, till these selfish fellows could be accommodated by a decrease regarding those who are entering the business.

But no; these same men who censure will rush into print with a large report, if they have such, while if the yield is light, no report will be given, as the person alluded to at the beginning of this article, decided to do. Now, bee-keepers, either report your failures or else be consistent enough to not blame the bee-papers for publishing large reports when you give them only such to publish. My idea has been that, if all would faithfully report, each year, that we should know about the truth regarding the profitableness of apiculture, and for this reason I have not failed in giving my report for the past 11 years, and shall now report for 1884.

I must say it is, by far, the smallest yield of honey that I received since 1869, which was the first year of my experience with bees. On page 356, I gave you a report of my loss of bees during the winter, which, together with the sale of bees that I had previously contracted, reduced my number (80) in the fall to 40 at the time spring was fairly opened. Fourteen of the weakest of these were set apart for queen-rearing, which left 26 to be worked for honey. As I had more orders for queens than I could fill with the nuclei made from the 14 weaker colonies, I had to draw quite largely of bees and brood from the 26 set apart for honey, to form more nuclei; so had there been an early supply of honey, this would have been a disadvantage; but as there was not, the loss from this source would not exceed 100 pounds.

The first honey obtained was from the golden willow, which was so meagre that it was consumed for brood-rearing nearly as fast as obtained. As there was no hard-maple blossoms, and my bees were short of stores, I looked forward to the apple-bloom with much interest, hoping that it would yield enough honey to carry the bees over the honey-dearth, which we always have for the next two weeks after the bloom from this source is gone. But I was doomed to disappointment; for with the opening of the blossoms came on a cold rain which lasted all through this bloom, with the exception of one-half of a day. I now had to resort to feeding to keep all my weaker colonies and nuclei alive, which feeding I kept up for nearly four weeks. Locust opened about June 12, when the bees got for a day and a half the most honey they had gathered so far; but with the afternoon of the second day, clouds and a cold wind arose, followed by rain which lasted until the bloom was past. After this we had splendid honey-weather till July 6; but as our fields are kept constantly under the plow, we have little white clover save along the sides of the road. From this, and the little raspberry and sumac bloom, the bees got a living, while a few of the stronger colonies stored a few pounds in the combs.

On July 6 it came off cold, with disagreeable, cloudy and windy weather which lasted for over a month, with the exception of now and then a day when the sun would shine a part or all of the day. Basswood, which gives our main honey-crop, opened on July 14, but it was of no use to the bees for a whole week, for they could not get to it on account of the wind, clouds and cold; besides, in such weather, honey does not secrete to any amount. At the end of a week one good day came, and the bees rushed for the basswood as if they were crazy; but with the next day the cold and clouds came again, when four days more passed with the bee-yard nearly as still as winter. At this time we had another day of honey, with one-half of a day more, after another cool day. Then the cold and clouds kept the bees at home during all the rest of the bloom, except as they got a chance to go out an hour or so occasionally when the sun would light out a little through the clouds.

After the basswood bloom was over, a little honey was secured from teasel during the next ten days when the weather would allow the bees to fly, after which no more honey was secured, although the month of August (after the 10th) and the first half of September were very warm; the absence of fall flowers and but very little buckwheat accounting for it.

Thus ended the poorest honey-season since 1869—the poorness of which was caused by bad weather during the bloom of all our honey-producing flora. As a result I have taken only 711 pounds of honey—272 pounds being extracted, and 439 pounds comb. This gives an average of 27¾ pounds for each of those set apart for honey, in the spring; and considering the few days in which they could work, they secured more than I could reasonably expect. I shall put in winter quarters 55 full colonies and about 20 small ones which will be made up by uniting nuclei. Most of the full colonies have nearly enough honey to winter them, but the united nuclei will have to be fed.

I have received nearly $500 for queens and bees, while the comb honey at 15 cents, and the extracted at 10 cents per pound amounts to $93, thus giving $593 the gross amount received from my apiary. From this I have to deduct about $63 for the sugar which was fed, which leaves $530 as my pay for the labor expended on the bees. By dividng $530 by 40, the number of colonies, spring count, it will be seen that I received an average of $13.25 each, as a cash profit; which is not a bad showing. However, had it not been for the queen-rearing part of it, I could well say that bee-keeping for 1884 has been nearly an entire failure.

Borodino, N. Y.

For the American Bee Journal.

Wintering Bees.

A. H. DUTTON.

One who is but slightly acquainted with practical bee-keeping might suppose that the above subject, if he were to glance over the past numbers of the BEE JOURNAL, was an apiarian topic stale, dry as dust, and threadbear to the point of general dissolution. This *a priori* notion, however, is a mistake, and that for two reasons: 1. Perfect certainty in wintering is a thing yet unattained by our oldest and most scientific apiarists. 2. New men are continually entering the field eager for the latest information concerning this, one of the most vital matters in connection with the bee-business. Hence, we shall give a general recapitulation of the subject up to its latest developments, and if any hint may be dropped to those who are veterans in the ranks, or guidance to those who are just enlisting, I shall feel repaid for my trouble.

In the problem of wintering, failure springs from the violation of natural laws in connection, either with food, heat, ventilation, moisture or physical characteristics. These cover the whole ground; and whilst one apiarist contends for one of these points, and another for some other one, and each seems to think that if the popular misapprehension in regard to the special phase of the point which he views as the seat of the difficulty, could be removed, unsuccessful wintering would be a thing that was. Whilst this is the case, the fact remains the same, that the points which I have enumerated embrace the whole field wherein the controversy lies, and which, without a shade of doubt, holds in the rectification of the popular practice in respect to one or more of these things, the solution of the problem.

Having thus defined in a general manner the ground where the danger lies, I am not going to make the claim that I can lay my finger on it and say, "Here it is," nor be so egotistical as to pretend to turn this article into a bullet of deadly aim, and lay it low at one shot. My powers of observation must be further cultivated, and my experience more extended before I could presume to make this attempt; but as one who recognizes the field wherein "the lion's den" must be located, I shall throw out some cautionary signals, or to employ another figure, by firing a "broadside" at the enemy, slay him by quantity, if not necessarily by correctness of aim.

Before laying out my methods, however, to more thoroughly clear the way, let us inquire: first, "What are the native instincts of the bee regarding the change from summer to winter?" second, "How far is it within the domain of human reason to interfere with these instincts beneficially?" In respect to the first, it is a rare thing in the state of nature to hear of a colony of bees being winter-killed. How many of us have heard of such a thing? In 99 cases out of 100, where do we see bees winter-killed when they are located in their untrammeled condition of nature—a hollow within the trunk or limb of some tree at a distance from the ground? So much for situation. Let us examine the internal economy of the house, and what do we find? We find the honey above the cluster principally, and everything overhead as air-tight and snug as propolis and wax can make it. No upward ventilation in nature; this is a rule with scarcely an exception. Below the combs and cluster is a large air-space or column of dead air, and by means of this the ventilation of the hive is secured; and with what success, observation has revealed to us. These then are the conditions under which the bee exists when left to follow its own inclinations, and we see them carried out, as far as circumstances will admit, in every box-hive and "log-gum" in the land, and with the degree of success following which their restricted quarters entail.

The foregoing, then, is what observation teaches us concerning the instincts which impel the bee to carry out "the first law of nature" in its preservation during the winter season. Now, let us ask, who is the author of these instincts? and is it placed within the province of man to interfere with them, with benefit to himself? In other words, are these instincts of the bee insufficient to secure its own highest well-being in the economy of nature, apart from human aid? Let it be understood that when we speak of instincts, that we mean what we say, and have no reference whatever to those slight changes in form, size, color, activity, etc., which may be produced by crossing two varieties of bees, or building up and perpetuating some freak of nature. For instance, such as we see in the so-called Albino bee, which, as Prof. Cook truly says, may frequently be found in our ordinary Italian colonies. These variations from nature constitute what Agassiz classes in his Natural History, as "breeds."

But I refer to none of these things, but exclusively to those cardinal principles which are implanted by God in the nature of the bee, which constitute its characteristics, make it what it is, and which no amount of scheming or contriving by man can destroy. What, then, is the very first of these principles or laws of its being? Is it not the same as that which hold the like position over the whole range of animated nature; viz: its self-preservation? Then is it within the power of the human mind to improve upon this grand, impelling motive of its being—a motive which leads it to "provide its meat in the summer," and to give itself no upper ventilation for the winter? Yes, it is within man's power when he also has reason to think that his ingenuity could teach the bee to gather clay for pollen, water for honey, or place its stores beneath the brood instead of above, or the drones to spend their energies in honey-storing instead of using them in the fertilization of the queen. Yes, when he seriously imagines that he can improve upon these other instincts of bee-nature, then will he also have license to think that he can improve upon their wintering-instincts as well.

However, to those who prefer to view the case in a different light, and are willing to fall in line with the wisdom of God, and shape their plans and activities to best promote the full execution of the principles which He has established in the economy of the bee, (and I profess to be among the number), to those I would say, let us so endeavor to enlarge our powers of observation, and increase our faith in the doctrine that the mental characteristics of the bee are as completely defined in their way as its physical; as to so regulate our manipulation in the apiary, as to best promote the fullest development of those divinely-furnished attributes, which, so far as concerns its own preservation, is as much shared by the bee as the head of creation—man.

Hence, we conclude first, that the instincts of the bee in its own preservation, are definite qualities given it by its Maker to secure this end, and are best fitted to do so; and second, that these instincts have a defined territory which is beyond the province of human reason to invade with benefit to man, and that inasmuch as it does so, injury to the bee is sustained, and loss to its owner results.

Then with these foundation-principles before us, we shall come to the question in hand, and on account of my favorite method of wintering, being on the summer stands, I shall treat the matter from this standpoint; but the principles which may be elucidated are equally applicable to every other style of wintering, although we leave it to others to do so.

Now, as we have before remarked, failure in wintering infallibly proceeds from incorrect practice in connection with one or more of the five points already alluded to. We shall enumerate them once more, and then after giving our system of fall preparation of the colony for wintering, shall deal with each in detail: Food, heat, ventilation, moisture, and physical characteristics.

As regards the fall preparation of the colony for wintering, much has been said concerning stimulative-feeding; some would have brood-rearing in full blast until the middle of October, and to this end often feed from 6 to 8 pounds of syrup to each colony during the fall. We believe this to be mistaken economy, for three reasons: 1. Because a good, prolific queen (and the apiarist should tolerate no other), and one not too old, will, under any circumstances, providing there is a good supply of honey in the hive, keep on breeding during the fall quite sufficiently to give a good force of young stock for winter, and thus the trouble of feeding is saved. 2. Unnecessary expense is entailed both during and after the stimulative-process; for the money for the syrup is gone, or all that represents it are colonies boiling over with hungry consumers. 3. Such is not the practice of a large part of our most successful apiarists of the day; and what they can dispense with and yet succeed so well, giving reports every whit as large as those who practice it, I should certainly not recommend; but this advice, however, only applies in those cases where the colony has had a proper queen during the honey-season, and when a good supply of brood in all stages was in the hive when the season closed. Now, as this begins to hatch out, contract the brood-chamber, if a large hive is employed (my own takes 18 frames 14¾x11¼), by removing the empty frames and placing them outside the division-boards. This causes the remaining frames to be better covered with bees, and so less danger of the brood becoming chilled; and at the same time, on account of what little pollen and honey that may be gathered, being stored in less compass in the hive, the queen, in our opinion, is stimulated to lay longer and more largely than otherwise.

When the time has come to finally prepare the colonies for wintering, the first precaution to be taken, is in respect to the first point in my category.

FOOD.

This must answer to two demands: First, healthfulness; second, sufficiency. To secure the first, if the colonies are to be wintered on honey, save 3 or 4 well-filled and sealed combs from the basswood or clover harvest, from each colony in the apiary, or if in number of pounds, we shall suppose that 15 or 20 are held back. Now place the frames containing the honey in the centre of the brood-nest; outside of them again, at each end, place one of the ordinary frames of fall honey and a frame of pollen, the last to be on the outside of all; the colony will thus be crowded on 7 or 8 frames, and will have an abundance of good food, and sufficient pollen in the hive to enable it to start brood-rearing in the early spring. Thus every opportunity which they have in nature, to thrive, so far as food is concerned, will have been supplied them by the careful apiarist.

If one be desirous to feed principally syrup, remove 3 or 4 frames from the centre of the brood-nest, and in their place put the same number of frames of nice, straight, empty worker-combs; outside of these, at each end, leave a frame of honey and pollen as before. Now feed the colony 16 or 18 pounds of sugar syrup made from white or coffee A sugar (1 pound of sugar to ½ pint of water). The feeder may be placed, after removing the frames outside the division-board, in the body of the hive, and the division-board slightly raised to permit the passage of the bees.

In furnishing syrup for winter stores it is advisable to feed it before the cold weather sets in, so as to give the bees an opportunity to seal the combs. The whole amount had better be fed in one or two installments. The reason we feed white honey or syrup, almost exclusively, to the bees for winter stores, and remove all of the pollen but that in two frames, is on account of deleterious substances which are often gathered by the bees in the fall after the regular honey-flow ceases, and which are apt to cause mischief if left in the hive. This bad food consists of the refuse from sugar and molasses barrels, juice of fruits, cider-mill refuse, honey-dew, etc. As regards pollen, Mr. James Heddon and others have pretty satisfactorily proven that too much of it is unadvisable for the same reason. Bees, like all other creatures, can only thrive on a proper supply of healthful food.

Our colonies are crowded on 7 or 8 frames in order to economize heat; and this brings us to the second subject on my list.

HEAT.

The hive which we employ, and which we believe cannot be excelled as a hive for wintering, has a double-walled brood-chamber with one inch of dead-air space between. This brood-chamber rests on a single-walled, enclosed stand, 14 inches deep, and this in turn (in winter) rests on the bottom-board. This stand has a variety of highly important uses which we shall refer to under "ventilation," our next head.

Now, in preparing the colony for winter, we place against the two side-walls of the stand, on the inside, two boards, each 14x15 inches, with one-inch cleats nailed to each end, so that when they rest in position against the walls of the stand, a space of one inch will exist between the boards and walls of the stand. Between the boards at each end, we place division-boards, and cause them to come immediately under the division-boards at the ends of the brood-nest above. The space outside the division-boards, at each end of the hive, we next fill with chaff or forest leaves above and below; and then over all in the half-story above the brood-chamber, we place a 5-inch chaff-cushion. This completes our arrangements so far as the interior of the hive is concerned.

We now place against the outside of the brood-chamber and stand, on each side of the same, what we have chosen to call "winter covers." These are constructed of any kind of rough lumber, and extend the whole length of the stand and brood-chamber, and as high as to protect the whole of the sides of the latter. At each end of these covers are nailed cleats 4 inches deep, so that when the covers are placed in position against the hive, a 4-inch space will exist between them and the sides of the hive and stand. They are now secured firmly in place by a lath nailed to the cleats of the covers over each end of the hive, and the 4-inch space of either side is filled with chaff or forest leaves. Over the top of the "winter covers," from cleat to cleat, now place two strips of wood about 5 inches wide, so that when the rain falls on the cover of the hives it will not run into the chaff spaces on either side. The cover is now placed on the hive proper, and its edges made to lap over the strips of wood on top of the "winter covers." This completes our wintering preparations, and we believe that they are amply sufficient to safely carry the colony through the most rigid winter known to Ontario.

VENTILATION.

This and proper food, conjoined with a good queen, we regard as the grand centre of importance in wintering bees successfully. Much has been written on the merits of upper and lower ventilation, and with some, it still remains a vexed question. But after reading and comparing the reports of years past by, and with numbers of experiments with either method, I am forced to give my verdict in favor of lower ventilation; and even had we not so read and compared, we should advise this plan, simply on the ground that it is in accordance with the teachings of nature. Good ventilation is the great corrector of dampness in the hive, and the remover of foul gases, such as carbonic acid and nitrogen, which are exhaled from the cluster above, or sulphuretted hydrogen which may arise from dead bees below; besides which, it is the means whereby the bees are constantly supplied with good, pure air for breathing. How important then is it that it should be duly attended to, and that its theory be thoroughly understood!

Air-currents take place according to fixed principles; viz: when any part of the atmosphere becomes heated it ascends, and the cooler air closing in on all sides, fills its place to undergo the same operation, if the source of heat continues. It will thus be seen that it acts in identically the same manner as does water in the process of boiling. In this case the heat being applied to the bottom of the vessel containing it, portions of the water become converted into steam, or is rarified, so to speak; and this being lighter than the water surrounding, it rushes upwards to the surface, whilst other portions of water less heated, take its place. Thus a current is established in the vessel, and continues to move so long as the water lasts.

Now, what is the source of heat in the bee-hive? It proceeds from exactly the same chemical process as we see exhibited when a fire is kindled in a stove, but merely without the attendant phenomena of light possessed by the latter. In the case of the combustion of wood, the oxygen of the atmosphere enters into combination with the carbon of the wood, forming carbonic-acid gas, and attended with the development of heat and light. In the case of our bees, the air finding its way into the tubes of their respiratory aparatus, part of its oxygen combines with the carbonized particles in the blood, with the formation of carbonic-acid gas, which, with the nitrogen of the air is exhaled, and being heavier than the surrounding air, falls to the bottom of the hive; and this chemical action carried on in the air-tubes of the bee, is accompanied with the exhibition of heat.

Now, as we employ the same cloth over our frames in winter (if it is untorn) as we made use of during the previous summer and fall, it will be seen that very shortly after our final fall-preparations of the colony for wintering are concluded, everything over the bees will be as air-tight as it is possible for propolis to make it. Taking this into consideration with the fact of a 5-inch chaff-cushion being placed over the cloth, it will be found that nearly the whole of the heat emanating from the cluster is confined in the hive. Ascending from the bees it reaches the cloth, and from thence is deflected downwards on all sides, and the cooler air from below being absorbed at the base and sides of the heated column, a circulation of air in the hive is established, which continues so long as the source of heat remains constant, or until the heat of the whole interior of the hive has become uniform with that momentarily given off by the cluster.

Knowing these facts, we recognize their importance if we desire at all times to maintain a circulation of good, pure air in the hive, to provide for a constant supply of cool air in the lower part of the same, and this we manage to secure in the following manner: Two holes, each 2½x½ inches, are made in the lower edges of one of the sides of the stand, and two similar holes in the wall of the "winter cover" opposite. Wooden tunnels are now constructed to connect the holes in the stand and cover, and through the passages thus made, the cold air has access to the interior of the stand, and from it to the hive above. But, if the cold air only has access to the hive, and no outlet be made for the descending columns of heated air subcharged with the vapor of water, carbonic-acid gas, nitrogen gas, etc., one of our most valuable features in the proper ventilation of the house is lost; hence we construct another passage through the opposite walls of the stand and "winter cover," to that containing the others, and thus the ventilation of the hive is perfected. This last passage is placed at about 1 inch from the upper edge of the stand whereon rests the brood-chamber, and in size it is ⅜x4 inches.

The general utility of the enclosed stand for the brood-chamber will now be recognized by providing a large air-space beneath the cluster. The ventilation of the hive is far more effectively secured than if the entry and exit of air all took place through the ordinary passage for the bees at the base of the side-wall of the brood-chamber; and, further, by employing this stand and the ventilation it affords, we, at all times, have a concentration of heat in the upper part of the brood-chamber—keeping the honey warm, and everything dry and comfortable around the cluster; besides which, by elevating the brood-chamber to the height off the ground that it does, instead of being back-aching labor to handle the brood and extracting-frames, it is converted into a comparative pleasure. What apiarist is there with his 75 or 100 colonies in one-story, or one-story-and-a-half hives, that will not hail this as an advantage?

MOISTURE.

The fourth point has also had its strenuous advocates, as being the prime factor in unsuccessful wintering, but whether it is so or not, we leave it to others to demonstrate; however, of one thing we are certain, that unless its formation is understood and provided against, mischief will be the penalty of neglect. The moisture in a bee-hive in winter is generated exclusively by exhalation from the respiratory organs, and, possibly, the bodies of the bees, the air entering the lungs of the bees (or what answers thereto), becomes saturated with the vapor of the water continually evaporating from the pulmonary tissues. In this condition it is then thrown off, and unless removed by a proper ventilating current, condenses on the colder portions of the hive and combs, which, in the case of many hives not so well protected as my own system calls for, becomes converted into a hoar frost, or runs down and freezes into a solid mass on the bottom-board, and sealing up the entrance which furnishes air to the cluster, thus smothering the bees; and further, by condensing on the combs, it often causes the honey which is in them to sour, and the bees feeding on this, disease is induced among them, and frequently, also, the combs become moldy and almost spoiled.

How, then, is this condition of things to be remedied? A well-protected hive like the one we advocate partially meets the question, and a thorough system of ventilation almost solves it; but to get rid of the remnants of the evil, place pieces of broken brick well dried, or still better, two or three lumps of quick-lime on the bottom-board under the stand, and this having a powerful affinity for water, will absorb any particles not carried off through the ventilator, thus the hive is left dry and healthy.

Just here we should like to notice one thing in connection with upward ventilation, and how frequently does it occur. The moisture in its passage through the chaff cushion is condensed in the same, and gradually increasing in quantity, forms at last a wet, soggy mass, immediately over the cluster, and exhaling at the same time a musty effluvia, thus, in our opinion, giving rise to the most favorable circumstances for the development of disease and death in the colony.

PHYSICAL CHARACTERISTICS

Under this caption, the fifth and last topic on our list, we shall notice briefly two things: 1. The hibernation of bees. 2. The duration of bee-life. To Mr. W. F. Clarke, undoubtedly, belongs the priority of having specially called the attention of bee-keepers to the subject of hibernation of bees; but whether in reality it is a truth, in our opinion, remains yet to be proven. True, Mr. Clarke has struck some heavy blows, but the nail yet remains to be clinched. However, be the issue as it may, every bee-keeper knows that bees certainly do pass the winter in a condition very much resembling, if not altogether, that of hibernation; hence, it becomes the scientific and progressive apiarist to study well and supply all the conditions favoring this state of repose, and to remove everything obnoxious to it.

Bees live during the honey-season, from 30 to 45 days; but all bees hatched about the time basswood bloom closes, and after that time, will probably live from 8 to 9 months, their energies not being exhausted in the field, are spent, so to speak, in the prolonging of life. However, after the first out-door activities of spring are set in, these rapidly die out, and then, unless a good queen is present and is filling the frames with brood to take their place, "spring dwindling," as it is termed, is the inevitable result. To make sure that all is right in this respect, and that the bees have plenty of stores in the hive, examine all the colonies on some fine day as soon as possible after the snow has gone off the ground. Note the condition of each colony, and if any require aid, supply it immediately.

And now in conclusion we would observe that if the objection should be raised to the foregoing methods, that they involve a great deal of labor, and, hence, are not suited to the practical apiarist, to this we would make a threefold reply:

1. That in reality very little extra labor is entailed beyond any good method of wintering.
2. Nothing pays better than a careful preparation of the colonies, year after year, and hence the most practical apiarist will be the most careful.
3. If any one enters the bee-business under the delusion that it is all play, that he has only to sit down and watch the bees put money into his pocket, and is unprepared at certain seasons of the year to perform downright hard labor from daylight till dark, if he owns 75 or 100 colonies and expects to succeed therewith, then I say, the quicker he gives it up, the better it will be for his bank account and his peace of mind.

Brussels, Ont., Sept. 17, 1884.

For the American Bee Journal.

Lake Shore, N. Y., Convention.

Pursuant to a call by the President of the Lake Shore Bee-Keepers' Association, it met at Fredonia, N. Y., on Sept. 6, 1884. Mr. U. E. Dodge was elected temporary chairman, and Mr. J. A. Benedict, Secretary *pro tem.* Those present then engaged in the following discussion:

Mr. Case: I would like to inquire how to take care of my bees to secure the best results possible.

Mr. Davis: You can get more surplus honey from old than new colonies.

Mr. Wilcox: I think Mr. Case has done well if he has doubled the number of his colonies this year

Mr. Dodge: There is a great difference in different kinds of bees. We cannot tell why Mr. Case did not get more honey. He did well, at least, as he has doubled the amount of his capital invested in profit therefrom, the present season. He ought to be satisfied. One hundred colonies would not be a bad investment if they cleared five dollars per colony. If I can get my bees through the winter safely, I can generally succeed well enough the remainder of the year. Last winter out of 139 colonies I lost only 4.

Mr. Davis: I have had colonies near each other that varied greatly in productiveness. From one colony I obtained 3 swarms and 12 boxes of honey, and the next colony, standing near, did nothing.

Mr. Hall: How did this prolific colony do the next season?

Mr. Davis: It did remarkably well. I divided one of my colonies and it produced 12 boxes of honey and the old colony did well also. I would like to know if it is good policy generally to divide bees?

Mr. Dodge: People differ on this question. If you wish honey, keep the old colony at work and let the division alone. But if you want bees, then divide the colony, etc.

Mr. Jaarda: Last fall I bought 3 colonies of bees, and put them into the cellar and they came out all right. In the spring I bought 2 more, and they were looking finely. The 3 bought in the fall stored nearly 100 lbs. of honey and did not swarm. The other two colonies swarmed and did not store much honey. My profit is out of bees that do not swarm. Only by perseverance can we succeed. If we can prevent our bees from swarming, then we can reach the acme of success in the honey business.

Mr. Case: I would like to ask, that if our main object is to get honey, how can we manage to get surplus of bees?

Mr. Gage: It is a well known fact that bees store more honey when not allowed to swarm. I would cut out all the old queen-cells but one, after the 7th day from the issue of the first swarm. When the swarm issues, the old queen goes with it. I cut out all but one so as to insure, if possible, better success in their future work. I have 50 colonies, and find it best to continue this course. In utilizing queens by this method I do not fail one time out of 50.

Mr. Davis: If you divide colonies they will not go to the woods.

Mr. Gage: You are not sure of that. When bees get the swarming fever, it is hard to break it up.

Mr. Hall: Do you think that this season is a favorable one?

Mr. Gage: I do not. While there is an abundance of clover, etc., it does not contain as much nectar as usual. The more closely we follow nature, the better we will succeed. I have had a prodigious yield from one colony alone.

Mr. Dodge: A colony that is divided does not go to work as readily as one that is not. It is considerable work to divide colonies. I cannot divide one usually in less than half an hour. If I had time I would divide more than I now do. It would save trouble. We must use tact and precaution if we expect to succeed. What about upper ventilation?

Mr. Wilcox: My bees, last winter, did not have upper ventilation and came out all right.

Mr. Dodge: My experience is that all this talk about ventilation is a waste of time. I do not think that it makes any difference about ventilation. My bees came through safely. I let in sufficient air from the bottom of the hive.

Mr. Fay: I have kept bees a lifetime. Last winter my bees had upper ventilation and I lost several colonies, but my son-in-law gave his bees nothing of the kind and he did not lose a colony.

Mr. Case; My opinion is that ventilation lets off the surplus animal heat.

Mr. Dodge; I do not believe that bees, of themselves, get very damp. But if they do, it is from some extra moisture that comes in from the outside of the hive. I find that bees kept in the cellar, gather moisture more rapidly than those outside. My bees that I wintered in the cellar were not ventilated at the top, or even very much any where.

Mr. Fay: My neighbor has an apiary that seldom freezes. It is near a hedge and is covered with snow nearly all winter.

Mr. Haven: I covered a hive over with straw and then with dirt, and the bees came through safely. This experiment shows conclusively that bees do not suffer so much from lack of ventilation as from lack of warmth.

Mr. Dodge: I would ask if there is danger from overstocking?

Mr. Gage: Not with honey, but with bees, perhaps.

Mr. Dodge: I believe that the opinion of overstocking is a delusion. Mr. Pond, of Mass., says that one acre of white clover will furnish 25 colonies with sufficient honey. We need not fear from overstocking. But in a poor season we are always overstocked. In a good season I would risk 1,000 colonies in my locality.

Mr. Fay: In my locality we must be overstocked, for out of 17 colonies I have only 3 lbs. of surplus honey. How is that for clover and goldenrod? My bees on foundation did no better this season than those without any.

Mr. Bolling: I do not think that this question can be exhausted. We express very much guess work in our different theories. The condition of the atmosphere has something to do with storing honey. Once I had one hive fill up with honey in five days, which had been entirely empty. This shows conclusively favorable in atmospheric conditions. They will not do well with the same number of flowers in some seasons as compared with others.

Mr. Dodge: If Mr. Bolling had owned 500 colonies, my opinion is that they would have worked in that special season with the same energy. We cannot expect, when there is no honey in the flowers, that we can get our hives filled. I affirm that we cannot overstock when the blossoms are full of honey.

Mr. Bolling: To have goldenrod yield honey plentifully, it must be warm weather. To-day, it is warm enough to suit the most fastidious bee or hornet.

Mr. Dodge: How and where to market our honey?

Mr. Bolling: That is a hard question. Honey to-day seems to be quite a drug in the market. People are suspicious. There has been too much adulteration by crafty dealers. We must have the "clear quill," and when they find us out we will have buyers enough. Our motto must be, "warranted pure."

Mr. Gage: By proper methods the trade can be worked up near home. Last season I had 960 lbs. of extracted honey and sold 900 lbs. of it at my own door.

Mr. Bolling: In seasons of great success in clover, goldenrod and heart's-ease blossoms, we will have a large surplus for distant markets; but ordinarily we can dispose of such goods at home. I do not imagine that our climate will allow us to be much over-stocked.

The subject for the next meeting is "The best method for wintering bees."

Adjourned to meet at Brocton, in Moss Hall, on Saturday, Oct. 4, 1884, at 10 a.m. Good attendance requested.

J. A. Benedict, *Sec. pro tem.*

For the American Bee Journal.

Sexual Functions of Queens, Drones, and Worker Bees.

A. R. KOHNKE.

Having found, within the last year or so, articles by two or three different apiarists expressive of disbelief in "parthenogenesis," together with some reasons, which would apparently justify the same, I have considered the subject not a little. I may be pardoned for not attaching much importance or weight to the observations of the average American apiarist, because I know that if it is not a question of dollars and cents, the average American does not trouble himself much about new discoveries, the knowledge of which is apparently of no practical use to any body. For this reason it has seemed to me that observations to establish new discoveries were not thorough enough to accept them as proven facts.

Let us consider proven facts first: The queen is the female bee, the drone the male bee, and the worker is a stunted female bee. To produce the worker, the queen must mate, or be fertilized; if she does not, the eggs, which she may lay hatch drones. It has been proven by microscopical investigations made by Professors Siebold and Leuckart, and Rev. Schoenfeld, that eggs laid in worker-comb, by a queen mated in the regular way, contained from two to five of the seminal filaments. These eggs were examined as soon as deposited, and the sperm-cells or seminal filaments were always found within the eggs and not on the outside. Enough eggs have been examined to establish this as a fact. Consequently, to assume that the workers change the sex of the egg, on the supposition that the sperm filaments adhere to the outside of the egg from which they may be easily removed, is contradictory to perfectly reliable authority, which have verified the opposite by ocular demonstration.

The same scientists have also proven by ocular demonstration that freshly-deposited eggs laid by a mated queen, in drone-cells, or those laid by a queen not having mated, as also those laid by workers, are devoid of these sperm filaments. Now, as one and the same fertilized queen has been used by these scientists to obtain both kinds of eggs which she deposited while being watched in an observatory hive, I think that we are justified in believing that such exact work by such close observers and investigators precludes all chances of error, as far as their investigations extended, which was to demonstrate the true sexual relation of queen, drone, and worker, and to show why eggs laid by the same queen should hatch workers or drones.

As a natural consequence, it has been assumed that it is voluntary with the queen to either impregnate the eggs that she deposits, or not.

This assumption is supported by the observations above stated, but does not, of course, admit of ocular demonstration. Well, this much we know of queen and drone. The workers, on account of their number, have escaped individual observation. Those which were dissected proved sufficiently, that they are stunted females.

The next problem was to discover what caused their being stunted. It has been found that it is the difference in food which has the effect to more or less develop the individual bee, and produce either a worker, on a diet of honey and pollen, or a queen, on a diet consisting of the secretion of the salivary glands situated in the heads of the young worker bees; this secretion is what is known as royal jelly. I may also remark here, that in old bees these glands dwindle or shrivel to such an extent that secretion is entirely suspended; this makes it apparent why mainly young bees should be employed to rear queens, and then the same bees not more than once, as their salivary glands, once exhausted, cannot resume their function afterwards; hence they are not fit, because unable to rear a good queen. But even if they can not or do not rear a queen, the desire to preserve their existence as a colony, is generally present, in consequence of which one or more workers begin to lay eggs.

It has been and still is a puzzle to the apiarist, how workers are fitted to assume the royal duty of depositing eggs. Many bee keepers do not believe it, giving as a reason that they have not seen it; still it is a fact that they do lay eggs, but these eggs always hatch drones. To entertain the idea that such a worker could or would be fertilized by a drone was considered so far from the probable that no bee-keeper ever mentioned it as possible.

But a bee-keeper, by the name of Kremer, in Germany, has made a remarkable discovery. He caught a worker and drone in the act of mating. When so caught, they were still connected by their sexual organs, and thus sent to Rev. Schoenfeld, who, at present, is the keeper of the large microscope bought by the bee-keepers of Germany. After an examination of them, he pronounced the worker to be not more nor less than any other worker-bee; a real, genuine worker it was, and not a stunted queen as was at first believed; nor were the sexual organs of this worker any more developed than any of the others which he had examined.

This discovery caused a great sensation among apiarists in Germany, as well it might. A writer in the *Illustrated Bienenzeitung* asks some questions which he partly answers, maintaining that the queen never lays any eggs which hatch drones, but that it is the business of the fertilized worker. Where that drone comes from, to do the first fertilizing in the spring, he does not say. The following is a translation of the main points and answers which he submits: "1. May a worker be fertilized? According to Kremer's discovery and the investigation of the bees by Rev. Schoenfeld, the question must be answered in the affirmative. 2 Had the worker, in question, a desire to mate? Certainly; otherwise the act would not have taken place, for a worker possesses the means to repel a drone in case the latter should want to enforce copulation. The observed fact is also proof conclusive that the stunted or smaller sexual organs of the workers admit of copulation. Microscopical investigation proved, also, that no part of the sexual organs of the said worker had been in any way injured or torn. Experience also proves that in a colony some workers are larger than others, and some drones are smaller than the average. 3. May such workers, in mating, become fertilized? Certainly; nature does nothing without an object. The object of mating is to fertilize. 4. Have laying workers been observed? Experience says, Yes; especially in a queenless colony. 5. What did such eggs hatch? Only male bees or drones."

The other points are of minor importance, in one of which he asserts that it has not been proven that queens ever lay eggs which hatch drones, which is contrary to facts; and he winds up by saying, "A queen which is fertilized lays such eggs only, which hatch either perfect or stunted female bees, according to the food with which the larvæ are supplied. The less stunted and fertilized workers lay the eggs which hatch perfect male bees or drones."

Youngstown, Ohio.

For the American Bee Journal.

The Ontario Convention.

Many kind references on this occasion were made to the large gathering of a year ago, when our city was honored by the presence of the many great bee-men brought together at the meeting of the North American Bee-Keepers' Association. We held our annual meeting during the time of the Industrial Exhibition, at which, too, the honey exhibits formed no unimportant part. The present increased interest manifested in bee-culture, as compared with only a few years past, is truly astonishing. Three evening sessions of nearly four hours each, and two forenoon meetings were all attended by many who, for the first time in their lives, had been present at such a meeting; and being invited to ask questions, they afforded no small amount of amusement as well as displaying intense anxiety in their efforts to master the mysteries of the bee-hive.

The themes and questions discussed covered most of the ground which is generally gone over, and the common conflict of theories had ample development. The answers as to methods and uses of ventilation were so flatly conflicting as to sadly bewilder the solicitous inquirers, and sometimes looked more like thickening the darkness than evolving any light. "Shall we clip the queens' wings?" "Yes!" "No!" "Which is the better for bee-forage, a new section of country or an old, well-cleared and cultivated one?" "New!" "Old!"

"Which is the best race of bees?" "Survival of the fittest," "Tree-top conditions," "Foul brood," "Preventing spring dwindling," "Fall feeding," "Shape of frames," "Swarming, and bacteria theories," none of them seemed to lack freshness of live treatment. Upon the whole, perhaps the special good-nature evidenced amid so spirited a discussion may have been somewhat promoted by lingering recollections of how hardly and good-naturedly big bee-men (here, a year ago), without mercy, hit each other's pet theories. In fact, the sort of enjoyment of the ease with which a good brother's "castles in the air" could be demolished, seemed to lend a charm to the exercises. Then, amongst all, the "toes" so rudely trod upon, so few seemed in the least tender.

Several of the number present wondered why we do not have these annual meetings oftener; as Pat Monahan wanted to have "quarterly meetings" held "monthly." Some of us suggested that Rochester, N. Y., is not so very far away, and a big meeting is to be held there in the near future. A number expressed a desire, nearly amounting to intention, to be there.

It is all very well to read articles on "hybrids" and all that, but for a real good time, some would say, give us a genuine, live International Bee-Keepers' Convention with a respectable sprinkling of lady members present; and absent all dry, long, well-written papers. To this should be added two or three bee-paper editors, and one or two crank advocates of "Queen-larvæ fertilization in the cell." But then we, of course, require on hand, too, a few large producers of No. 1 comb honey, and a fair proportion of anxious-to-be-instructed novices. Then, ho, for next, nearest bee-keepers' convention! S.

Toronto, Can., Sept. 20, 1884.

For the American Bee Journal.

A Dark Picture.

J. M. HAMBAUGH.

A more promising season than that of the present year never dawned upon the enthusiastic apiarists in this region. Mother Earth seemed abundantly clothed with the tiny petals of white clover, and as the days increased in length and warmth, our hillsides and valleys were soon carpeted with living green. None were more enthusiastic than myself in the cause, and nothing was left undone to secure our portion of the nectar from white clover.

March 23 marks the first joyous impulse of the eager little bees, as they hovered over the opening buds of the soft maple. Living as I do at the western terminus of the sloping bottoms of the Illinois river, with the abrupt bluffs to the north and west heavily studded with timber, and basswood abundant, to the south and east a vast landscape of waste land subject to overflow, gives me a vast and diversified range. The banks of the river, four miles distant, are skirted with timber of various kinds, and soft maple, willow and button-brush intervenes in hundreds of acres from there to tillable lands. It is in this direction that the attention of the honey-bee has been drawn during the entire season.

My surplus arrangements were all put on by May 10, and my bees were in prime condition to reap the clover harvest. How happy I was on May 19, when the first white petals began to show above the ground, and I prided myself of soon being in possession of the nectar suitable for the gods. The hillsides and the valleys became white, and my bees labored—but where? Not to hillsides and valleys, but to the bottom lands; and when my hives became burdened, I excavated some of the sections that were nicely sealed. We sampled one, and our verdict was similar to that of the Editor's, when he saw fit to term it "vile stuff," etc. Our brilliant anticipations were blasted, and we consoled ourselves with our brethren's and sister's experience—Mrs. Harrison for instance—for misery likes company, you know.

Basswood bloomed on June 28, and no benefits resulted therefrom. The unruly little laborers still preferred the regions of the honey-dew to that of the basswood bloom. I would like to know if this honey-dew is likely to stay with us from year to year; if so, we want recipes to manufacture vinegar at 75 cents per gallon, or hunt a new occupation.

It was, perhaps, the middle of July ere they ceased to carry in the "vile stuff," and their attention turned to a more legitimate channel, since which time the quality is much better, though the quantity not so great.

Our Spanish-needle harvest has been good, and the general condition of the bees on the bottom-lands was never better; but after one reaches the uplands, three miles back from the Illinois bottom, the situation is quite the reverse, and which is the dark picture mentioned in the heading of this article.

There has been no harvest for the bees during the entire season, save the white clover, and that yielded but a scant supply. During the balance of the long season they have remained inactive, and were compelled to draw on their own resources for sustenance. Demoralization from protracted idleness, or something else, has caused "spring dwindling," or something akin to it, till many which were strong colonies at the close of the clover harvest, at present can scarcely muster a queen's retinue. One man in Mt. Sterling, this State, with 75 or 80 colonies, thinks that but few of them will survive the winter.

The bees appear inactive when they attempt to fly, and fall to the ground; and after futile attempts to regain their wings, they crawl about and die. Dead bees are found over the sidewalks quite a distance from the hives. Feeding is the order of the day, where the colonies are sufficiently strong to justify it, as what little they accumulated in the spring is about consumed. Has this occurred in other localities? and am I right in my conjectures as to the cause? I have examined the brood, and so far as I can see, it is in a healthy condition. The trouble seems general throughout the uplands.

Versailles, Ill.

For the American Bee Journal.

Comments on Several Subjects.

JOSEPH M. WISMER.

I beg to state that the BEE JOURNAL has been carefully perused, searching for the long-felt want, information, to enable me to substantiate my experiences in producing honey in its different forms. On page 215, Mr. Wm. H. Balch, in the second paragraph of his article, concludes that all animals have their peculiar scent, which exactly expresses my sentiments. I well remember, but a few years ago, a neighbor of mine had a small quantity of butter packed and ready for market. During the night the dog killed a skunk under the veranda of the house, just outside of the cellar; the following morning the butter, milk, and part of the eatables presented a greenish hue, and were unfit for use.

On page 485, Vol. XVIII, Mr. Heddon gives a good description of the effects of the odor of the honey-bee, when disturbed, has upon the body of man; and even when in the apiary, bees flying around within smelling distance, would create such a tinkling sensation in the head so as to produce asthma.

On page 567, present volume, is an article from Dr. Tinker, concerning poisonous honey. I do not wish to undermine the Doctor's practical profession, or to interfere with the Heddon-theory, but merely to present to the readers of the BEE JOURNAL my experience as a honey-producer. In my youthful days I could not eat honey without causing severe colicky pains. Being a lover of bees and honey, I could not abstain from the sweets which the bees had stored in their well-made cells.

For more than 20 years as a bee-keeper in the old-fashioned way, I have suffered from its effects, not knowing the reason why such a sweet as honey, so highly spoken of in the holy writ as wholesome food, should be poisonous, until I commenced keeping bees on the new or modern plan, and following the instructions of the BEE JOURNAL. I noticed that extracted honey, when eaten, would be more mild than comb honey in my stomach, thereby proving that honey ripened by the bees was where the cause existed. This extracted honey is impregnated with this same discharged poison as Mr. Heddon speaks of.

Observation induced me to make further investigation in this matter. On one morning in 1882, when clover and basswood honey was at its best, I extracted all the honey which 2 colonies had, and then in the evening, again, in order to get this vegetable sweet in its natural state and ripened by evaporation. This honey I found that I could eat with safety, and with pleasant sensations.

Not being satisfied with this experiment, I knew of three friends who used the same precautions as I had in eating honey. I persuaded them to eat of this prepared honey, and with the same results. So that led me to believe that honey ripened by the bees contained enough of the so-called poison to produce colic to some people, and, again, to others premature death. With this prepared honey I healed or cured my delicate or weak stomach so that I can with safety eat any kind of honey. In order to more fully substantiate these facts, I would ask the Doctor a question: Why does the sting of a bee produce greater pain with some people than with others?

On page 536, Mr. A. A. Fradenburg asks, "Can any bee-keeper who reads this, show that a singe colony of bees has ever had diarrhœa when they have had no pollen at all?" which I cannot pass without relating a few facts in my own experimenting with bees to winter successfully. Last fall I prepared 20 colonies in four different ways, all equally in good condition; 5 colonies were in natures own way; 5 with pure granulated sugar and without pollen; 5 with sugar and pollen; and the remainder with pollen, sugar and honey. I was very anxious to winter at least a part of my bees.

I found that they were doing well until Jan. 20, when the thermometer indicated 16° below zero, and the bees on the summer stands began to show uneasiness, and continued so until Jan. 22, when the mercury was 24° below zero, which was uncommonly cold for this locality. The colonies prepared with sugar and pollen were the first ones to spot their hives and die. On opening the hive to see their condition, I thought to myself, "There! pollen cannot always be the cause of bee-diarrhœa." For instance, Mr. F., on the same page, in the first paragraph, quotes this: "I (Heddon), this morning, received a letter from Mr. Shuck, and he suggests the idea that vegetable matter is the cause of the trouble, etc." The case that I had last winter goes to show that sugar or honey in their best forms, is vegetable matter as well as pollen, which I conscientiously believe will, in a certain condition, or in a low, wet temperature, produce diarrhœa in its worst form.

On page 556, Mr, S. J. Youngman writes: "Upon close inspection I saw that it was fine liquid spray or fine drops which was ejected from the bees." Nature has so constructed or devised the honey-bee as to have means to separate the water from the sweets contained in the nectar in its raw state, which I will try to explain. Four years ago last spring, I fed my bees in order to stimulate breeding, and I found that sweetened water fed outside of the hive, would induce the queen to lay with a good will. I also noticed a similar phenomenon as that witnessed by Mr. Y. and his assistant.

Three following springs, when too cold for my bees to forage with safety, I would introduce sweetened water to keep them from the danger of dwindling. I found that around the feeder would be as wet as though it had been raining, which induced me to search for the cause. Hundreds of bees circulating through the air just above my head, and having been at the feeder, was what kept the air as though fine liquid spray or fine drops of water was falling, so long as the bees continued to feed and the air was perfectly clear.

On close inspection of the bees that worked with a good will, I found that they would fill themselves and take wing to eject the water accumulated, and then would again come down to the feeder to refill themselves with sweetened water before entering the hive. This process I believe to be a common feature in the bees in the foraging field. Mr. Y. further says: "Now, what does this mean? What bearing does it have on the dry feces theory? Also, on the pollen idea?" I emphatically say—*none.*

Jordan Station, Ont.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Brood-Cells.

How soon, after the young bee has emerged, will a cell be used again? or how many times may it be used during 4 months of the breeding season? F. F. G.

Waterville, Me.

ANSWER.—I think almost immediately, so that each cell will sustain the production of a worker-bee every 21 days, drones 24 days and queens 16 days. This is the average length of time with but slight variation.

Will Bees Produce Dampness?

Will putting bees into the cellar cause dampness to such an extent that vegetables and other things will will be injured? I have 30 colonies of bees in the vicinity of Troy, and I wish to place them in the cellar where they have been kept; but before I am permitted to do so, the gentleman desires to know, from good authority, whether they will produce dampness or not. I have taken from three bee-yards about 5,000 pounds of honey, which I consider only half a crop. Two thousand pounds of it was comb, and 3,000 pounds of extracted honey. A large portion of it is of a very fine quality. Our bee-papers speak of honey-dew, but there is none of it here. G. H. ADAMS.

North Nassau, N. Y., Sept. 16, 1884.

ANSWER.—I have wintered my bees (some 30 to 60 colonies) in our house cellar several times, and have never seen any damage done to the vegetables or anything else in the cellar. Neither do I remember of any report of any such damage from bees.

Absconding Swarm.

I hived a very large swarm of bees on June 3, and on June 10 they left for parts unknown. The hive was new and clean, and had Dadant's foundation in it. They filled the hive with honey before they left. Please explain the cause of their actions.

Plier, Wis. HENRY STARK.

ANSWER.—No one has ever been able to account for many strange freaks of bees; especially such actions of swarms as the one which you mention. I have had a few swarms leave new, clean hives well supplied with choice foundation, and that, too, after they had made a good start therein, and lodge in a small (too small) rotten cavity of a tree where the rotten wood lets the combs drop as fast as they became heavy. The natural instinct of bees, in many instances like other insects, leads to failure and death.

Winter Stores for Bees.

1. Neighboring bee-keepers state in the last issue of the BEE JOURNAL that they have but half a crop. From 150 colonies, spring count, I have increased them to 200, and secured 9,000 pounds of comb honey in one and two-pound sections. What per cent. of full crop do you regard this?

2. Upon examination I find many colonies which are fully supplied with honey, without brood or eggs, yet having queens and plenty of room. Why is this? Would you at once begin to stimulate such colonies to brood-rearing?

3. I winter my bees in the cellar, and put into winter quarters from Nov. 1 to 15. Would you now supply colonies which have not sufficient stores for winter? or is it best to wait until a few days before placing them into winter quarters?

E. W. THOMPSON.

Hindsdale, N. Y.

ANSWERS.—1. Your yield is a good one, and though not as large as has been taken before from the same number of colonies, it is far above the average of the country.

2. I cannot account for such a condition of your brood-chambers, never having any such conditions here. During the honey-dearth, just after basswood, is when our bees breed the most. Can it be that your hives and field are both destitute of pollen?

3. I would feed the deficiency now, while the weather is warm.

SELECTIONS FROM OUR LETTER BOX

Only One-Third of a Crop.

The season here has been a poor one—only one-third of a crop of surplus honey, and but few swarms, but those were very large ones. The weather was too dry and too cold.

R. B. WOODWARD, M. D.

Somerset, O., Sept. 20, 1884.

Terrible Loss.

I have lately lost a good, comfortable house, worth $2,000, by fire. In it I lost nearly all of last year's crop of honey, and hundreds of volumes of an excellent library.

WM. BALLANTINE.

Sago, Ohio, Sept. 17, 1884.

It Pays to Use Foundation.

The honey crop here is rather light this year. Some colonies have done well, while others have gathered but little honey. From 7 colonies I received 9 swarms, of which only two have gathered enough honey to winter on. Having seen Mr. Doolittle's question, "Does it pay to use comb foundation?" I thought I would try the experiment, so on June 17 I hived an Italian swarm of bees in a Langstroth hive containing 10 frames filled with comb foundation, and 64 one-pound boxes filled with foundation. In 7 days they had the 10 frames filled with honey, and were working in the surplus boxes. I have taken from that colony 70 one-pound boxes well filled with fine honey, while other swarms coming a week or two later have not honey enough to winter on. The cost of the comb foundation did not exceed $1.75. To me it looks as though it pays to use comb foundation. FRANK HATCH.

Lisle, Ill., Sept. 22, 1884.

Killed by a Bee-Sting.

On Sunday, Sept. 21, 1884, Mrs. Sturdevant, who lived in Fairfield, Fayette County, Iowa, while walking home from a neighbor's, where she and her husband had been visiting, was attacked by a honey-bee that got into her hair. Her husband killed it, and immediately she was attacked by another, which stung her 9-16 of an inch below the upper margin of the lower left eye-lid, and about ⅛ of an inch nearer the outer than the inner canthus of the eye. She was about 30 rods from her home when stung. She requested her husband to extract the stinger, when, upon examination, he could see the place where she was stung, but did not see the stinger. She immediately went home, and on going into the house, her daughter asked her what was the matter, when she replied that a bee had stung her. She asked her daughter for the camphor, and immediately went to her bed-room, and lying down upon the bed, her daughter then saturated

a cloth and applied it to the wound. She went into what appeared to be an apoplectic fit, no spasmodic jerking of the muscles, and in five minutes, this being about 15 minutes after she was stung, she was a corpse. To all appearances she had been a strong, healthy person. A good physician was sent for, but got there sometime after she died. The Doctor thinks that the bee-sting was the immediate cause of her death. B. F. LITTLE.
Brush Creek, Iowa, Sept. 22, 1884.

Short Honey Crop.

We have had a short crop of honey in this region. I began in the spring with 210 colonies and increased them to 390, apparently in good condition. My honey crop is 6,500 pounds, nearly all of it being comb honey.
J. F. SPAULDING.
Charles City, Iowa, Sept. 24, 1884.

Local Convention Directory.

1884. *Time and place of Meeting.*
Oct. 2.—Whitesides, Ill., at Morrison, Ill.
A. B. Kreider. Sec.
Oct. 2.—N. W. Ohio, at Defiance, Ohio.
W. H, Ralston, Sec.
Oct. 3.—N. Ind. and S. Mich. at Goshen, Ind.
F. L. Putt, M. D., Sec.
Oct. 4.—Progressive, at Bedford, O.
J. R. Reed, Sec.
Oct. 4.—Marshall Co., Iowa, at Marshalltown, Ia.
J. W. Sanders, Sec.
Oct. 4.—Wabash Co., at Wabash, Ind.
Henry Cripe, Sec.
Oct. 8.—Central Illinois, at Bloomington, Ill.
W. B. Lawrence, Sec.
Oct. 6, 7.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.
Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.
Oct, 22.—N. W. Ind., at Laporte, Ind.
A. Fahnestock, Sec.
Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.
Nov. 10.—Will County, Ill., at Beecher, Ill.
Gustavus Kettering, Sec.
Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.
Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.
Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.
Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

National Bee-Keepers' Association.

As has already been noticed, the next annual meeting of the North American Bee-Keepers' Association will be held in the city of Rochester, N. Y., Oct. 28, 29 and 30, 1884. Essays will be read as follows: "Wintering Bees," by W. F. Clarke, of Canada; "Nectar," by Prof. A. J. Cook, of Michigan; "Marketing Honey," by Thos. G. Newman, of Illinois; "Foul Brood," by D. A. Jones, of Canada. The committee has decided to use the balance of the time in discussing these and other questions of importance. Those who cannot be present, and have questions that they desire to have discussed or answered, will please send the same to the Secretary, Dr. C. C. Miller, of Marengo, Ill., or to Rochester, in care of the convention, on or before the first day of the meeting. Notice as to place of meeting will be given hereafter.
C. C. MILLER, *Sec.*
L. C. ROOT, *Vice-Pres.*

Convention at Chicago.

☞ The Northwestern Bee-Keepers' Association will hold its fifth annual convention at Owsley's Hall, northwest corner of Robey and West Madison streets, Chicago, Ill., on Wednesday and Thursday, Oct. 15 and 16, commencing at 10 a. m. on Wednesday, and holding five sessions. Those who have attended one of these annual re-unions will need no urging to induce them to come again; those who have not, should remember that Father Langstroth characterized the last meeting as "representing the largest number of large, practical and successful honey-producers of any convention that he had ever visited." This meeting being held during the Inter-State Industrial Exposition, reduced railroad fares may be had on nearly all of the railroads. W. Z. HUTCHINSON, *Sec.*
C. C. MILLER, *Pres.*

☞ The bee-keepers' association of Central Illinois will hold their quarterly meeting at Bloomington, Ill., on Wednesday, Oct. 8, 1884, at 10 a. m.
W. B. LAWRENCE, *Sec.*

☞ The Whiteside Bee-Keepers' Association will meet at Morrison, Ill., at 1 p. m., on Oct. 2, 1884. All bee-keepers are cordially invited.
A. B. KREIDER, *Sec.*

☞ The Wabash County Bee-Keepers' Association will hold its second meeting on Saturday, Oct. 4, at the Court House in Wabash, at 10 a. m. All bee-keepers are cordially invited to attend. Come one and all and bring your wife and children, and we will try and make it interesting for you. HENRY CRIPE, *Sec.*
AARON SINGER, *Pres.*

☞ The Cedar Valley Bee-Keepers' Association will hold its second annual meeting in Beckley's Hall, South Side, Waterloo, Iowa, on Oct. 1 and 2, 1884. Reduced rates over the different railroads. All interested are cordially invited to attend and make this one of the best meetings in the State.
H. O. McELHANY, *Sec.*

☞ The Northern Indiana and Southern Michigan Bee-Keepers' Association will hold its next session in Goshen, Ind., on Oct. 3, 1884, at 10 a. m. Important topics relating to the management of the apiary will be discussed. Considerable time will be devoted to answering questions from the query-box. Several distinguished apiarists are expected to be present. All persons interested in bee-culture are invited to attend. A large meeting is anticipated.
F. L. PUTT, M. D., *Sec.*
A. BLUNT, *Pres.*

☞ The Tuscarawas County Bee-Keepers' Association will hold its next meeting at the apiary of Geo. F. Williams, in New Philadelphia, O., on Thursday, Oct. 23, 1884.
G. F. WILLIAMS, *Sec.*
A. A. FRADENBURG, *Pres.*

☞ The Progressive Bee-Keepers' Association meets on the first Saturday in October, 1884, at Bedford, O. A general invitation is given.
J. R. REED, *Sec.*

Special Notices.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

TRIAL SUBSCRIBERS.—The Weekly BEE JOURNAL will be sent to any *new* subscriber in North America from now until the end of 1884 for 25 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

We have had some bound in Russia leather, with colored edges—price 60 cents.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each

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34D4t **J. T. WILSON,** Mortonsville, Ky.

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We will with pleasure send a sample copy of the **Semi-Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to

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40A1t Waterville, Lamoille Co., Vermont.

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NOTICE.—The business of manufacturing the Given Foundation Press will still be continued at Hoopeston by J. R. Caldwell, who has controlled it for the past 3 years in the interest of D. S. Given & Co. Address all orders to D. S. GIVEN & CO., Hoopeston, Illinois.

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34Dtf PINE PLAINS, N. Y.

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Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
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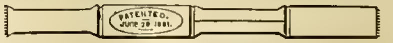

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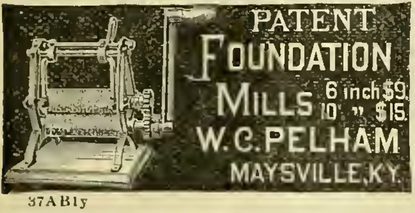

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Howard's importation of Holy-Land Queen are the only pure queens of this race in this country. We have 2 of the finest queens that Mr. H. imported, and will have by Sept. 15, 100 young queens from them. They will be fertilized 3 miles from all other bees, and we guarantee them to be equal in every respect to the imported queens. Price, $2.00 each. A copy of the Bee-Keeper's Handy-Book or one of our combined Queen and Drone Traps will be given with each queen. We can send you as fine Italian or Albino queens as can be purchased in the world. Warranted queens, $1.00 each; tested, $1.50; select-tested, $3.00 each.—Secure your breeding-queens for another season.
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Hamilton, Ill., Dec. 10, 1883.
MRS. FRANCES DUNHAM, De Pere, Wis.
Dear Madam:—We have made about 38,000 lbs. of foundation on your mills this year, and the foundation has given universal satisfaction; so much so, that several manufacturers have stopped manufacturing to supply their customers with our foundation. We have also manufactured about 10,000 lbs. of thin foundation on the Vandervort machine for surplus boxes, and it has been equally a success, but for brood chamber foundation, yours is still unexcelled.
Yours, CHAS. DADANT & SON.

MRS. FRANCES DUNHAM, De Pere, Wis. Beeton, Ont., Dec. 10, 1883.
Dear Madam:—I have made over 100,000 lbs. of foundation on one of your machines, and would not now take double the price I paid for it. Yours very truly, D. A. JONES.

MRS. FRANCES DUNHAM: Genoa, Cayuga Co., N. Y., Dec. 12, 1883.
All prefer the foundation I manufacture on one of your mills, to that made on any other machine I have no difficulty in rolling it from 10 to 12 feet to the pound for sections.
Yours respectfully, J. G. WHITTEN.

MRS. FRANCES DUNHAM: Kenton, Ohio, Dec. 29, 1883.
After using one of your foundation mills for the past 3 years, we can't say too much in its favor And for brood foundation, it stands head and shoulders above all. Yours, SMITH & SMITH.

MRS. FRANCES DUNHAM: Omaha, Neb., Jan. 18, 1884.
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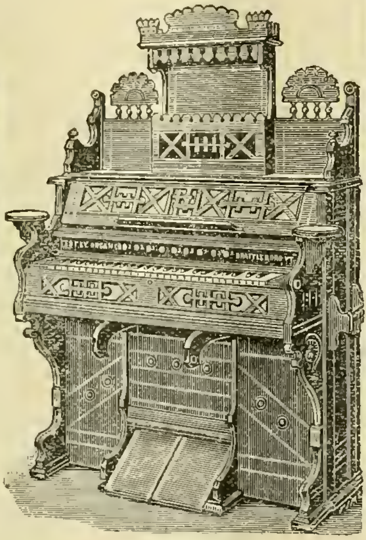
Send for description and Price List to
FRANCES DUNHAM, De Pere, Wis.
2BCtf



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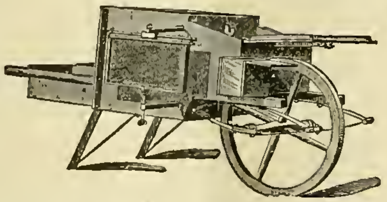

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1868. 1884.

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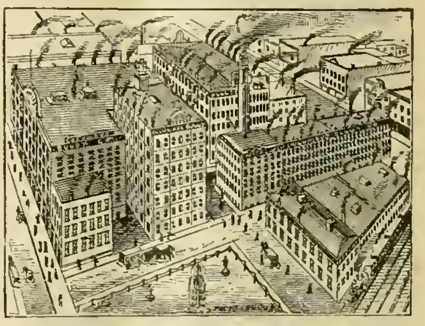

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THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. | Chicago, Ill., October 8, 1884. | VOL. XX.—No. 41.

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **50 cents**.

Entered at the P.O. as Second-Class matter.

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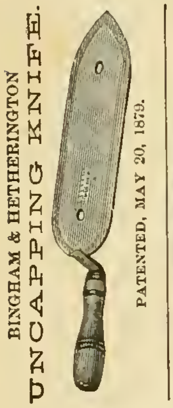
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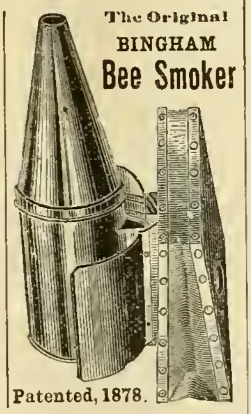

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Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

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Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., OCTOBER 8, 1884. No. 41.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

"Honey-Dew" for Winter Stores.

Notwithstanding the caution that we gave in the BEE JOURNAL for Aug. 6, 1884, we learn that there are quite a number of bee-keepers who assert that their bees will have nothing else for winter stores. We do not wish to interfere with their rights or privileges, but will present the matter again, so that they must "sin against light and knowledge" if they "still persist in their murderous designs" towards their bees.

To allow the bees to go into winter quarters with naught but the so-called honey-dew, is sure to result in nearly a total loss. As proof for this assertion we will cite a bee-keeper of Wisconsin, who, to our knowledge, last winter, lost 107 colonies out of 125, because they were condemned to try to subsist on the vile stuff called "honey-dew." That they did not all die is due to the fact that the 18 colonies happened to have some white clover honey stowed away in their hives where they could get at it, and hence this little gleam of light among the darkness—the few *living* bees among the myriads of *dead!* "What shall we do? asks an enquirer, who adds: "We have nothing else to give our bees; they have gathered no honey this year." Nothing else to give them, when confectioners' or granulated sugar can be bought for less than 7 cents per pound! Let them die for want of food when a dollar will save a whole colony! Pshaw!

Would you let your best cows or horses shift for themselves, and live or die, as the case may be, depending on the grass they could find during our cold winter blasts—rather than spend a dollar or two for winter food for each of them?

What would be thought of the business sagacity of farmers who would manage as before described with their stock? Aye, what would be thought of their claim to *sanity?*

Will bee-keepers show any more business sagacity or sound sense if they let their bees shift for themselves, gather "honey-dew" because there is naught else to gather, and then leave them to live or die, as the case may be, when a dollar a colony would save them?

Let it be borne in mind that the bees will not eat the honey-dew fraud, except as a dernier resort—when it comes to that or nothing! And what is the result? It takes but a short time to wind up their existence.

Fortunately, in some localities the fall crop of honey is quite good, and the bees will have enough from that source for winter use, for the weather is very favorable for gathering honey. The "honey-dew" may be utilized for spring feeding, when the bees have frequent flights—but not for winter stores under any circumstances.

Several persons have reported quite severe sickness after eating the trash on empty stomachs. And now let us add a word about the placing of such stuff on the market.

A tour through the honey marts reveals the fact that quite a lot of the *vile* stuff is marketed under the cognomen of "thick buckwheat honey," in the extracted form. It is equally a serious matter to state (though it is the truth) that some of the comb honey on this market is tainted with it—so great was the supply of "honey-dew" when there was a general dearth of nectar in the flowers. Now, what will the effect be on the market? It will retard and contract sales—those who buy it once, want no more.

But this is not all; at the beginning of this season comb honey retailed at 25 cents, wholesaling at 20 and 22 cents; now we hear of lots being sold at 12 cents per pound, and extracted has been sold as low as 6½ cents per pound. All this because some bee-men have thought more of the "filthy-lucre" than of honor and integrity! Let us hope that there are none among the readers of the BEE JOURNAL who would be guilty of selling the "vile trash" as honey. If they have, and it is labeled with their names—Good-by to their honey trade in the future.

This shows the importance of Conventions and Bee-Literature. Educate! Educate! is the watch-word. Drive out ignorance, non-progressive management, and old-fogy notions, by hard arguments and wise counsels. Let all think these things over. and *be wise.*

☞ Convention at Chicago, Oct. 15. It promises to be a very interesting re-union of the bee-men of the West. Mrs. L. Harrison, Peoria, Ill., writes to the *Prairie Farmer* as follows:

> I can indorse fully all that is said in the call for the Northwestern Bee-Keepers' Convention. The membership of this Association contains the names of prominent bee-keepers of Iowa, Wisconsin, Illinois and Michigan. No other city is so accessible to the apiarists of the North and West as Chicago, many diverging lines of railroad centering there. The officers of the Asdociation yearly secure reduced rates at hotels and restaurants, so that the expense of attendance is trivial, in comparison with the benefits gained.

☞ The preparation of bees for winter should now be the study of all judicious bee-keepers. If not yet decided as to how to prepare them, read up at once; apply the knowledge obtained to practice, and be prompt in making all the necessary arrangements.—*Indiana Farmer.*

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

Foul Brood, its Propagation and Cure.

Mr. Frank Cheshire, than whom there is not a more progressive and scientific apiarist in England, has spent much time in studying the cause and cure of that terribly-fatal disease called "foul brood," and is very confident that he has discovered a satisfactory cure for it. At the request of the British Bee-Keepers' Association, he has prepared the following very exhaustive article, which we copy from the *British Bee Journal.*

We feel sure that the apiarists of America will extend to him a hearty vote of thanks for his patient study and careful investigations, as well as for the following treatise in which he has given to the world a new remedy—or at least a newly-applied remedy—for that most-to-be-dreaded disease—FOUL BROOD. The article is rather lengthy, but it will repay a careful perusal :

About two months since I was invited by the committee of the British Bee-Keepers' Association to address the present Congress, then to be convened in connection with the International Health Exhibition, on the absorbing but apparently well-worn topic of Foul Brood. My consent to that invitation was mainly given on two grounds: first, a confidence that I had a method of curing this terrible malady far in advance of any that had previously been brought before the bee-keeping community either by others or myself; and, secondly, that the writing of the paper would furnish me with an excuse and reason for that large devotion of time which I foresaw a new and independent investigation of the subject from its scientific side would require—an investigation which I had long intended to undertake, in order to test facts which I had noted during previous years, and which it seemed impossible to reconcile with commonly received opinions. To these facts and to the results of my recent inquiry, so far as I have as yet been able to complete it, I now, therefore, ask your kind and indulgent attention, in order that we may all apprehend together the grounds upon which I venture to diverge somewhat widely from theories which have been admitted during the last seven years at least as things undisputed, because indisputable.

Apiculture is attracting more attention in this country than it has ever previously received. Bee-keepers are multiplying on every hand. From the throne to the humblest cottage the charms or the profits of apiculture are getting a recognition. The bee-keeping of to day is no more like that of the first half of this century than the goods train is like the carrier's cart. We have our combs built in days instead of weeks. Bees rear drones or workers as we give them order. Supers have gone and sections are finished as though bees had recently learned the use of the rule and the plumb-line. Honey is demanded by the ton in the manufacture of biscuits. The poor cottager may add to his comforts and his culture by attending to his hives; and yet, amidst all this pleasant prospect, seeming to promise greater things for the future, a dark cloud—causing most to fear, and even breeding despondency in the breasts of not a few apiarists—is hovering amongst us. Foul brood, despite all the information given, is now not only present, but rapidly increasing; and were it just to the owners, I could point not to diseased colonies merely, but to apiaries of 60 or 80, where, perhaps, not one has escaped contamination. Letters daily, and lately almost every post, arrive with some sad tale of disaster. If the unqueening and comb-excising, or burning or starving plans must be adopted, ruin is meant, profit anticipated becomes loss realized, and hope yields to despair. Nor is the reason of this far to seek. In former days, when bees were kept in the same garden, descending from father to son, increasing their number in the spring by swarming, to be reduced to the old limits in the autumn by the sulphur pit—when none left their native spot, except an occasional swarm, perhaps, as a gift to a near neighbor, and when none were ever imported from afar, foul brood might have lurked here and there, but the facilities for its propagation were wanting. Now, how different! Bees are ever traveling by our railways through the length and breadth of our land, these, reared often in company with many colonies where are to be found queens hailing from the Sunny South, where the disease has been often rampant, and coming, as these swarms sometimes may, from colonies not above suspicion, are, it is to be feared, but too often the instruments for communicating the germs of destruction in localities previously free. I delight, however, to recognize that this sad state of things need not, and I believe will not, continue, for, from reasons which will be presently apparent, instead of now regarding a visitation of foul brood in my apiary as a terrible disaster, I should esteem it as a trifling and temporary inconvenience very far less grave than the loss of a queen. I will now consider the subject under three heads: 1. The nature of foul brood as a germ disease; 2. The means of its propagation; and, 3. The methods of its cure.

THE NATURE OF FOUL BROOD AS A GERM DISEASE.

The appearance of foul brood is, undoubtedly, familiar to nearly all bee-keepers. A larva, if attacked early, begins to move unnaturally, and instead of lying curled round on the base of the cell, frequently turns in such a way as to present its dorsal (back) surface to the eye of the observer. A little attention will then show that the color of the larva is inclined to yellow instead of being pearly white. Such grubs are only rarely sealed over. Those more advanced before the disease strikes them, are in due course sealed, but death overtakes them, their bodies become brown and fœtid, and as the sealing sinks it becomes pierced by an irregular hole. From this may be gathered the general indications of the disease, which is usually accompanied by very energetic fanning at the hive entrance, from which, in advanced cases, an indescribable and nauseating odor is emitted. The larvæ and chrysalids which are dead of the disease, dry to a coffee-colored, tenacious mass lying at the bottom of the cell; so tenacious, indeed, that it may be drawn out into long threads like half-dry glue. The drying-process being completed, a blackish scale is all that remains. This was formerly supposed to be the only condition in which the foul-broody matter, so-called, was a centre of infection; but we shall presently discover that this notion has no foundation in fact.

The disease is terribly contagious, and once started, soon spreads from cell to cell, and not infrequently from colony to colony. The knowledge of bee-keepers extended little beyond this, in December 1874, when a translation from the German by Mr. J. S. Wood, of Nyborg, gave an account of some experiments by Dr. Schonfeld, which may be thus summarized: Some foul-broody matter was placed on a plate pierced by a hole, below which, and passing into it, was a glass tube 2 feet long; a bell-glass covered the plate, and it bore another tube inserted into a hole in its crown. The lower tube was perfectly open, but the upper one was plugged loosely with cotton wadding. The sun shining on the glass, warmed the contained air, and a current was produced. Dr. Schonfeld describes the foul-broody matter as being full of micrococcus, and, examining the cotton wadding, he tells us that he discovered innumerable micrococci. Some of this wadding was placed over larvæ in a hive, and the larvæ were removed three times, but upon the fourth experiment seven larvæ died, their bodies being found full of micrococci. He also informs us that blowfly-larvæ, by the cotton wool being placed upon them, contracted the disease, and the bodies, upon examination, revealed innumerable micrococci. These experiments were accepted as so satisfactory and conclusive that the matter here rested; and again and again I examined microscopically, specimens of foul-broody matter sent to me without for a moment suspecting the very serious error underlying these observations, upon which I do not wish to cast any discredit, although two very accomplished microscopists whom I have consulted, agree with me that any supposed observation of micrococci on cotton wool could only be accepted with extreme caution.

But the fact of being able at once to spot foul brood by a microscopic examination of the coffee-colored matter was an advantage. In October 1879, a well-known bee-keeper sent off two small brown masses found in a super, one to the "British Bee Journal" and the other to the "Journal of Horticulture." The latter came to myself, and I pronounced it foul brood instantly. I saw it under a power of 500 diameters. The "British Bee Journal" affirmed it to be simply dried pollen—a pardonable mistake. But the bitter scolding I received in the aforesaid "Journal," for my folly in pronouncing this to be foul brood, induced me to visit the apiary from which it came, and in which every colony turned out to be a prey to the dread malady. The microscope here was the means of starting remedial measures ere too late.

In spite of all that has been written or said since that time, we appear, so far as the nature of the disease is concerned, to have made no advance. The expressions "bacteria," "fungus," "micrococcus," have been used without any very definite ideas lying behind them, and there the matter apparently has rested. Before attempting to explain what I venture to believe the disease actually to be, it will be necessary to give a few definitions and explanations.

Science has recently shown that all putrefactive changes, fermentations, and very many diseases, are brought about entirely by minute organisms, which are, in fact, rudimentary vegetables. To them the general name of Schizomycetes has been applied, because their method of increase is by splitting or fissuration.

These micro-organisms are divided into four genera—micrococcus, bacterium, bacillus and spirillum. We shall presently see that two only of these, micrococcus and bacillus, are essential to our present purpose, and so the others will be left out of view. There are many species of each, and they may be classed as—septic, those causing putrefaction; zymogenic, causing definite chemical changes, such as butyric fermentation, chromogenic, or color-forming, and pathogenic, or disease-producing. Confining our inquiry within the narrowest possible limits we have to do with pathogenic micrococci and bacilli. The former may be roughly described as minute globular bodies, which, at intervals, become slightly elongated, and then show a compression at what may be called the waist, giving them the form technically known as the dumb-bell. The compression becomes more pronounced until by separation two tiny globes are produced from the one; each of these will in turn divide, and so multiplication may go on at an astonishing rate.

Bacilli, on the contrary, are rod-shaped, and if we could suppose a common ruler to elongate without increasing in thickness, and then at a definite point break into two, to again increase in each part in like manner, we should have a fair idea of the whole matter; but sometimes this increase in length is not accompanied by separation, so that a line of bacilli may be formed comparable to a long string of sausages, and such is denominated a leptothrix. Under certain conditions, however, the bacilli produce spores (or seeds), which the micrococci never do; while in addition, bacilli, unlike micrococci, are provided at their extremities with wondrously delicate filaments called flagella, with which they strike the fluid containing them, and so swim much as a fish does by the use of its fins; so that shape and the power of spore-production and self-directed locomotion sharply divide one from the other.

This explanation, for the introduction of which no apology is needed, since upon it turns a right understanding of the line which I took in the inquiry, will, I trust, be sufficient to enable even those who have not studied the question of micro-organisms at all, to follow the details now to pass before us; concerning which I must express my thanks to G. F. Dowdeswell, Esq., M. A., member of the Council of the Royal Microscopical Society, for the lively interest that he took in my investigations, and for the many helpful suggestions which he gave me. I happily mentioned to him at one of the Royal Microscopical Society's meetings the work in which I was engaged.

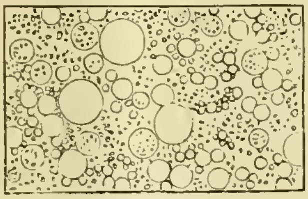


FIG. 1.—*Healthy Juices.*

Taking a small quantity of the juices of a healthy grub, and spreading it out under a thin glass under the microscope, one is presented with such an appearance as is seen at Fig. 1; fat globules are numerous, while blood-discs abound, and everywhere may be noticed tiny particles which are constantly slowly dancing with what are called Brownian movements; but if a speck of coffee-colored, foul-broody matter be similarly treated, we find neither fat globules, blood-discs, nor molecular base, but observe the field crowded with very small ovoid bodies, as we have them represented at Fig. 2. These are the micrococci of Schonfeld; but if this substance be stained according to the modern plan of Weigert and Koch, and then carefully examined, in all probability we shall discover, associated with the ovoid bodies, a very few other organisms, longer, and rod-shaped, while we notice that the so-called micrococci are neither round nor dumb-bell-like, but oval, or boat-shaped. This led me at once to suspect an error, and further searching showed me, if, instead of coffee-colored matter, such as that usually sent for microscopic examination, the body of a grub, dead, but in a fresher condition, were taken, the number of the rod-like bodies very considerably increased, while that of the ovoid ones diminished, as seen in Fig. 3.

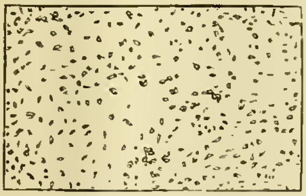


FIG. 2.—*Foul Brood, last stage.*

My own inoculated colony—inoculated for experimental purposes—was cured, and gave me no material; but soon I obtained a comb from a suffering colony, and then had the opportunity of expressing the juices from a death-stricken larva. These, when examined under a power of 600 diameters and carefully illuminated, were seen, to my great delight, to be full of active rods, swimming backwards and forwards, and worming their way between the degenerate blood-discs and fat globules, as represented in Fig. 4; while here and there were long strings of them, the leptothrix form previously referred to. Three questions now required answers: 1. Was this undoubted bacillus always associated with foul brood? 2. If so, was it cause or effect? 3. If the cause, what was its life history? It would weary to explain how these answers were obtained, as the work involved many days of incessant application at the microscope, the preparation and comparison of about 200 microscopic slides, and the rough or somewhat careful dissection of at least 100 grubs, taken from various colonies, in different conditions of the disease, and at sundry periods after their removal.

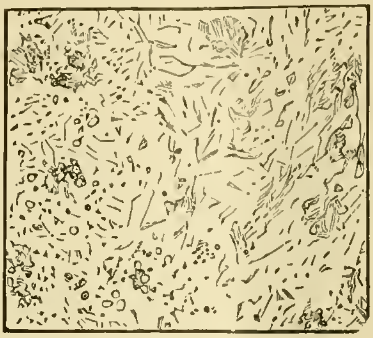


FIG. 3.—*Foul Brood, late stage.*

I found that in every instance that the beginning of the attack was marked by the appearance of bacilli in the blood; that these bacilli were, in many cases, at first long, thin, and marked by the presence of bead-like points; that as this form disappeared, the bacilli, pure and simple, multiplied by repeated division, that these bacilli, when magnified about 1,300 diameters, presented the appearance seen in Fig. 5; that these were active, swimming rapidly either backwards or forwards, and that when an end-view could be obtained of one of them, it was seen to be describing a small circle; that when the disease was in rapid progress leptothrix forms were common, some of them reaching even the 1-100th of an inch in length; and that as the fluids of the grub failed by loss of fats and albuminoids, the bacilli put on the spore condition. They widened and drew up their protoplasm or mycoprotein from their extremities, as we see indicated in Fig. 6, and thus became what Schonfeld had in error called micrococci. After the death of the grub, and during the assumption of the viscid, putrid condition, this constant alteration of bacilli into spores continues. After removal from the hive, it goes on so rapidly that in three or four days scarcely a bacillus, as such, is discoverable, but the spores are innumerable. The reason of Schonfeld's mistake, so far, is intelligible; he saw the spores only, and judged them to be micrococci; but the

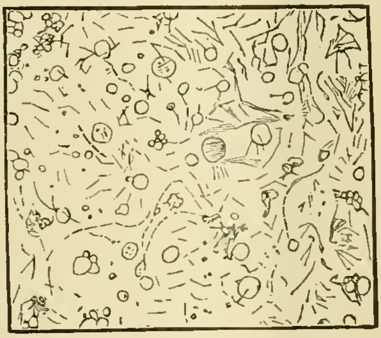


FIG. 4.—*Foul Brood, early stage.*

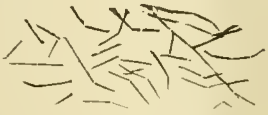


FIG. 5.—*Foul Brood.*

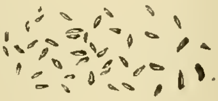


FIG. 6.—*Foul Brood.*

continuance of his error through all this investigation is a mystery which I am quite unable perfectly to explain.

Foul brood, then, is a bacillus disease; and in these days, when the 'germ theory' is the question of questions amongst pathologists and physiologists, it is extremely interesting for us to note that science has lately shown that different species of bacilli also cause consumption, cholera, typhoid, leprosy, and many other diseases afflicting the human family; whilst amongst animals, glanders, splenic fever, sepitcœmia, etc., arise from a similar cause. This particular bacillus seems not unlike "Bacillus anthracis," which the researches of Pasteur have lately brought so much before public attention.

Since the force of conviction thus obliged me to contradict the conclusions of Schonfeld, I felt it incumbent upon me to repeat his experiments; for if the disease be really a bacillus, how could the communication of it to the larvæ of "Musca vomitoria" (blowfly) produce, as he says, micrococci in that insect? I experimented on 60 specimens: Twenty were not brought near foul-broody matter, 20 I attempted to infect with bacilli in their active condition, and 20 by spores. At the end of 24 hours I examined carefully two from each lot, but with no apparent result. In 24 hours more, two again, but still failed to see any evidence of disease. By a further delay of 24 hours, one of those infected with coffee-colored matter was found to have a pretty considerable number of active bacilli swimming in its fluids. The non-infected showed many micrococci. This was most completely confirmatory of my position; but how could it be reconciled with Schonfeld's assertion, that he found the dead flies full of micrococci. Had he searched further, he would have discovered that dead blow-flies are generally full of micrococci. They take in with their food (decomposing flesh substances) swarms of septic micro-organisms, and these at their death multiply within them; but any observation carefully made with a decent instrument, would show the immense difference between these micrococci and the spore condition of the bacillus. Schonfeld's last assertion, that by means of these micrococci he established foul brood in the larvæ of the bee, and found these larvæ containing innumerable micrococci, is past my comprehension. The only solution, if we accept these statements, that I can at all suggest, is, that the Brownian movement of the molecular base of the fluids was mistaken for micrococci; but this supposes most unskillful observation, and possibly a very poor instrument, while, for anything that I know, Dr. Schonfeld may be possessed of ample skill and elaborate appliances.

I cannot refrain from expressing my conviction that it is much to be regretted that so misleading an account of experiments, to all appearances conclusive and complete, should have been given to the apicultural world. In their absence, it is hardly possible that we could have all been in the dark so long. I find in my notes that actually eight years ago I saw these bacilli, and should very possibly, have not allowed the observation to drop unless I had felt that the question of foul brood was a sucked orange. Not a few others of us from a similar cause have been kept from the path of discovery.

But in yet another way I have striven to prove irrefragably that the etiology I have given is correct. Taking a number of well-developed drone-larvæ from a healthy colony, their juices were expressed and strained into two test tubes 3 inches long and ½ inch wide. No. 1 now received a very minute quantity of coffee-colored matter containing spores mostly, while No. 2 was infected with a trace of bacillus-containing fluid from a larva just dead. These test tubes were each supported by a tin slip having a hole in its centre through which the tube passed, but the lip could not, and they were thus suspended, loosely corked, between the frames of a colony, so that the exact temperature for germination should be kept up. In twenty-two hours, I found the spores had in large part disappeared, and that bacilli in threads existed in considerable numbers, while the bacilli added to No. 2, were increasing by division, proving again that the spores produce bacilli so soon as they pass into conditions for germination, the reverse process obtaining when these conditions cease.

For many years I have entertained the conviction that the often-repeated statement that the disease affected the brood only, was not merely not proved, but opposite to the evidence at our command. This statement has been again and again made as though it were as certain as that 'two straight lines cannot enclose a space,' but I am glad to note that Mr. Cowan has shown that deeper insight which is the outcome of scientific training as he merely says: 'foul brood does not seem to affect the bees.'

We may take from a colony two or three frames containing 5,000 larvæ each, and it will continue to progress pretty much as though it had lost nothing, while if foul brood attacks and kills, say 1,000 of its grubs, it, as a rule, very perceptibly diminishes in strength. The only explanation that appears is, that the bees die with the disease, but that according to a necessary instinct, they leave the hive and finish their course alone. I, therefore, resolved to try to settle this point. Going to the experimental colony, then in my possession, I noticed one bee nearly dead, on its back, another hopping in abortive flights of 3 or 4 inches, and presently found a third and fourth worn out and too far gone to enter the hive again. The first bee contained nothing remarkable, but the second was almost an empty shell, the air-sacs occupied nearly all the abdomen. The stomach and colon were exceedingly small, and the amount of fluid I could obtain truly microscopic, but this was enough for the microscope, which showed it at once as full of active bacilli. The question was answered. The large consequences flowing from it were clear. Swarms must no longer be stated as incapable of carrying the disease. Bees from a presumably clean hive, if in an infected apiary, may carry the infection. And so, to set all at rest, I placed the bee in spirits, and now offer it to any microscopist of repute for examination; but this bee is not needful, for Nos. 3 and 4 gave me similar results, and so have some others since, making it clear that a very large proportion of imago (adult) bees from a foul-broody colony, die of bacillus, or, as Mr. Hooker remarked to me a few days ago, when talking of this matter, 'In a foul-broody colony the candle is burning at both ends.'

This discovery is pregnant with consequences. As workers and drones are liable to it, why may not queens suffer from it? Although I have had, of course, no opportunity of giving direct evidence here, analogy says they must; and if so, may not those who assert that imported queens have introduced foul brood be, after all, right? In a case occurring to myself last year, a Ligurian queen was successfully inserted and laid fairly, but foul brood appeared and she died. At that time I did not connect the circumstances, but they rise to my remembrance and bring a doubt. Further, if the queen may be infected, why not the egg? So far as I have been able to investigate, I believe that it occasionally is. Some would say that the size of the egg would forbid this, but these spores are relatively minute. The egg is 1-14 of an inch long and 1-70 of an inch in diameter, yet it could contain above 100,000,000 bacilli in the spore condition: the spore being no more in relation to the size of the egg than a single drop would be in a cistern containing 1,500 gallons of water. The investigation of this point I must leave to others, or to the future, as it may be necessary to infect one of my colonies, and it would also appear to be necessary to infect the queen to get the eggs in proper condition; but great caution will have to be exercised as the sources of error are so numerous and the manipulation so difficult, but an example in point is at hand which shows that the idea is not improbably correct. "Carpenter on the Microscope," page 375, says:

"A most notable instance of such propagation is afforded by the spread of the disease termed "Pebrine" among the silk-worms of the south of France; the mortality caused by it being estimated to produce a money-loss of from three to four millions of sterling annually for several years following 1853, when it first broke out with violence. It has been shown by microscopic investigation that in silkworms strongly infected with this disease, every tissue and organ in the body is swarming with minute cylindrical corpuscles about 1-6000 inch long; and these even pass into the undeveloped eggs of the female moth, so that the disease is hereditarily transmitted. And it has been further ascertained by the researches of Pasteur, that these corpuscles are the active agents in the production of the disease which is engendered in healthy silkworms by their reception into their bodies, whilst if due precaution be taken against their transmission, the malady may be completely exterminated."

A matter for consideration now presents itself of some moment. The name, foul brood, has been given under a misapprehension, and is manifestly inappropriate since the disease is not specially of the brood at all. Popularly it may yet pass, for the title is so crystallized into bee-literature that it would be difficult to displace it, but scientifically it cannot be admitted. I, therefore, with due respect claim the discoverer's privilege of giving a name which shall represent generically and specifically what the disease really is. I suggested to the Rev. Herbert R. Peel that he should be sponsor to a new name meaning Bacillus of the hive. He consents, but his sponsorship will, I am sure, in this instance, consist not in training and guarding, but in pursuing to the death that terrible and nauseous pest hereinafter to be called "Bacillus alvei." Let us now turn to our second point.

THE MEANS OF THE PROPAGATION OF THE DISEASE.

Although the methods of propagation of this disease are in all probability varied, and, as yet, not in detail fully understood, it may be said without hesitation that the popular idea that honey is the means by which it is carried from hive to hive, and that mainly through robbing, is so far an error that only occasionally and casually can honey convey it from colony to colony. I have searched most carefully in honey in contiguity with cells holding dead larvæ, have examined samples from colonies dying out in rottenness, inspected extracted honey from terribly diseased colonies, and, yet, in no instance, have I found a living bacillus, and never have been able to be sure of discovering one in the spore condition; although it must be admitted that the problem has its microscopic difficulties, because the stains used to make the bacilli apparent, attach themselves very strongly to all pollen-grains and parts thereof, and so somewhat interfere with examination. This is quite what would have been anticipated, because honey by its very viscosity is somewhat antiseptic, and the rapid movement of these especial micro-organisms, which seem essential to their propagation, is prevented by it. I have tried infecting honey and growing bacilli in it, but without the smallest approach to success.

Nevertheless, to feed honey from foul-broody hives (or, as I ought to say, colonies infected with Bacillus alvei) to healthy ones without taking some precaution would be absurd; but boiling is neither the most convenient nor the best plan, as we shall see presently. I anticipate here the question, "Is honey, taken from diseased bees, fit for human food?" Morally, I should object to sell for table purposes honey which had been stored in the fetor of a diseased colony, but scientifically I could see no cause for impeachment if the flavor of the honey were good, for the chance contamination of a baccillus would be no risk. Even pathogenic bacilli may be swallowed, apparently without harm, if there be no internal rupture of the mucous membrane, while human saliva, containing as it does micro-organisms, derived from the air, will often kill small animals if a particle of it be inserted beneath their skins.

My belief is that the grubs are most usually infected by the antennæ of the nurses. These traveling in the darkness of the hive become aware of the condition and needs of each occupant of the brood-cells by constantly inserting their antennæ, which must continually, where disease reigns, be brought into contact with larvæ full of bacilli, and also into contact with those sticky masses into which the larvæ change about two days after death. The removal, then, of spores is highly probable, and these transferred to the next grub fed, will there start the diseasd. These sticky masses will be found, too, to extend to the very front of the cells, and as the bees perambulate their combs, the claws, or more probably the pulvillus, which stands between them will be in danger of removing spores, and depositing them upon other cell-edges, to infect other grubs at the critical time of cocoon-spinning.

The supposition that in the dried condition of the dead larva the "micrococci" (?) are thrown off into the surrounding air must be replaced by facts founded upon observation. The first authorities are in general agreement that micrococci are not thrown off at all; and even if their opinion stood the other way, it would not affect the question, since I hope I have successfully shown that no micrococci exist in these dried larvæ. If it were otherwise, the face of every honey-cell would be closely dusted with death-dealing germs, and the case would appear hopeless; but this is not contradicting that it is possible, or even extremely likely, that the tramp of the bees does frequently detach numbers of spores which fly about in the air, and settle here and there, often where they take effect, many of them being carried into healthy colonies by the indraught set up by the fanners. When a hive is robbed, I strongly incline to the belief that it is rather the feet and the ANTENNÆ which carry infection home with the robbers than the honey in their sacs. Indeed, the ordinary opinion would appear to have no better foundation than very many other of the guesses which have impeded the progress of truly scientific apiculture; and I find that Mr. Cowan remarking nearly six years ago, "The honey is supposed to contain the spores, although I must say I have never been able to detect any by the microscope." This part of my subject is extremely difficult of positive proof, but with a body of facts before us our conclusions are not likely to be seriously wide of the mark. A very large number of observations has shown me that the disease is not found at all, except as infrequent exceptions in the digestive tube of the larva, but it lies wholly and absolutely in the blood; but did honey convey it we should certainly often see its traces in the alimentary sac. In the adult bee, on the contrary, the disease, although present in the blood, is generally very acute in the chyle stomach, and the effects seem to be those of consumption of the bowels. The reason for the difference, I have no time now to explain, but will simply point out what I believe no observer but myself has discovered—that the bowel of the larva is cast off with the skin at the time the chrysalis condition is assumed, and that the digestive apparatus of the imago bee is an entirely new and different organization from that possessed in the larval state. The size of "Bacillus alvei" is such that a quadruple string of them extending from London to New York could be formed out of one cubic inch of material. Ordinary dust-motes to these organisms would be like hen's eggs to sand-grains, so that the difficulty, if any had been felt, respecting their being carried about, should vanish. Nor is their multitude less astonishing. I have examined many grubs which must at least have contained 1,000,000,000 of them. A statement which, after inspection of the many microscopic slides I have prepared, will be accepted without question. In the royal jelly, so-called, of a queen dead of bacillus, I could discover no bacilli, nor have I succeeded better with the food provided to the workers, notwithstanding that I examined several hundreds of the cells containing feeding grubs, surrounded by dead larvæ; so that, although I would not dogmatize, my strong opinion is, that commonly neither honey nor pollen carry the disease, but that the feet and ANTENNÆ of the bees usually do. I also think it probable that occasionally, at least, nurse bees infected bring the disease-germs to the mouth in feeding the LARVÆ, and then turning foragers, leave a germ or germs in the nectary of a flower, which visited by another bee becomes the means of infection to it; the malady is thus carried by adult bees into other, and perhaps somewhat distant, apiaries. Balancing all the probabilities, it would appear that most generally the adult bee takes the disease, and then carries it directly or indirectly to the brood. An ailment of a rather different kind, from which the house-fly suffers, is known to take effect by its germs settling on the spiracles, or between the abdominal rings. The spiracles of the larva of the bee may also be the especially vulnerable points. But I must hasten to the third, and practically the most important section of the subject.

THE METHOD OF CURE.

Those whose apiaries are suffering from the ravages of foul brood have had two classes of advisers: those recommending curative measures, and those counselling destruction. The former class has been but a small one; and I remember that years ago Mr. Cowan and myself almost stood alone in this matter. We had had, unfortunately, to deal with foul brood; we had attempted curative measures, and had succeeded. We were anxious that others should share the knowledge of our methods of treatment, for they were not identical; but from reasons, which from my point of view I will endeavor to explain, the destroyers seem for the moment to have the best of it.

Salicylic acid has been the substance which has been hitherto constantly used as a remedial agent; but it has had three main difficulties to contend with. First, it is troublesome in application; next, the question of dose has never been properly worked out; and lastly, it has, from a mistaken idea of its insolubility, been associated with borax, which has reduced its curative effect, and made the treatment somewhat dangerous.

1. It is troublesome in application. It has been recommended to uncap the dead nymphs, removing their bodies when possible, and to spray the combs and frames thoroughly, and next feed with syrup containing salicylic acid. All this must be done regularly and through a considerable period. My observations, more especially during the last three summers, lead me to believe that the good effects almost all arise from the food, and that the spraying is often a mischief instead of a benefit. 2. The question of dose has never been worked out. Mr. Cowan recommends 1-80 salicylic acid, 1-80 borax as a spraying fluid (1-40 of the whole); or if the drugs be bought by Troy weight, which they almost certainly would be, 1-37 of the whole; while my formula was 25 grains in 8 ounces of water, or 1 in 140; and Mr. Hilbert recommends 1 in 200. In addition, spraying is a most uncertain and variable quantity. One man will soak combs and bees by the spray, another will only dampen them. I think in any case 1-40 too high a proportion. Three weeks since I received a comb in a box, accompanied by a letter, asking what was to be done. Foul brood had broken out, and salicylic acid had been used, but without benefit. The comb contained a large number of dead grubs; and I commenced a microscopic examination, expecting to find the usual living bacilli, and in other cases the spores; but to my bewilderment, the first eight dead LARVÆ contained neither bacillus nor spore, the ninth was filled with the former, and had undoubtedly died of the disease in the normal way. But what of the others? My suspicion was that they had been poisoned by excessive drugging, and writing at once for details, I obtained information which puts the suspicion beyond doubt.

Mr. Raitt, some years since, complained that salicylic acid was a humbug, and gave as one reason that he had used so much that he had killed the grubs, and yet it did not cure. Depend upon it, the order of mind that concludes if 1 ounce of salts will keep off a bilious attack for a fortnight, ¼ of a pound will keep it off for two months, exists in the bodies of many bee-keepers amongst the humbler classes, and so the extremely uncertain quantity given by spraying has its dangers, beside which, spraying chills terribly, and takes all pluck out of the bees. Salicylic acid is a poison. The French "Comite Consultatif d'Hygiene Publique" has twice reported against the employment of salicylic acid, even in small quantities, as a preserving agent in food. These reports have been strongly opposed by interested parties; but it has been shown that it has frequently acted as a cumulative poison, and has in several instances proved fatal.

The borax shall be dismissed with a word. It does nothing but, by making a new compound with the salicylic acid, gives it great solubility. Using hot spray, as I have recommeded, makes it needless. It adds to the complexity and nauseousness of the remedy; and I notice that Mr. Cowan, in the last edition of his "Guide-Book," has substituted Hilbert's for Muth's formula, and so omits the borax. But Mr. Cowan now introduces to us Bertrand's Fumigator. If all bee-keepers were as scientific as Mr. Cowan, I should believe in its being a great service; but it is simply a subliming apparatus in which for every sized hive, and every strength of colony, and every possible number of frames, 15½ grains of salicylic acid must be used. The dose seems to have been worked out here with great refinement; although no doubt the 15½ grains is but the equivalent of 1 gram named as the quantity by M. Bertrand; but when we call to mind that at 156° C. salicylic melts, and at 220° decomposes; when we remember, too, that in chilling the acid drops in a dew, we can easily see that one operator with the same 15½ grains would get twenty times as large a quantity into the hive as another; and so my hope of Bertrand's invention is but slight indeed. The plan, too, of feeding with medicated syrup those colonies that are not, but may be attacked, is one that I think the best understanding of the case would not recommend, at least I do not now join in the recommendation. A drug is, by its very nature, a poison, and even though only used as a prophylactic, must have its damaging effect.

I am not by any means well acquainted with apicultural literature, and so do not know by whom or when the idea of shutting diseased bees up until their honey was consumed before putting them into their permanent home was originated. I would here only say, that with our present knowledge, that in a colony taken from an afflicted hive, many, at least, of the bees are themselves filled with bacilli. we can see that the plan of shutting up is the very worst that could be adopted. The bees that drop, as Mr. Simmins suggests. "from exhaustation." would most probably be those dying of foul brood. and being confined (the stricken with the sound) are likely to perpetuate the disease. The real benefit arises here, not from consuming the honey as I have shown, but from delaying the time of egg-production, and so letting the diseased bees die off before they have a chance to act as nurses. If this ruinous, and to me cruel, plan were in any way necessary, I should say, unqueen your diseased colony, cutting out all queen-cells ten days after, and giving from a healthy colony a cell just sealed. When the queen hatches, make a swarm of the whole into a skep, and transfer next day to a frame hive. The skep is only needful because making the swarm is likely to throw spores into the air. The queen will, in eight or nine days begin to lay, and all would most probably go well, much more probably than by the starving plan. The diseased bees would be dead and gone before any nurse-work commences. All the brood that will hatch is secured, and the queen gets no chance of contamination by constantly putting her abdomen into infected cells. A possible contingency if she be allowed to begin ovipositing in the old and diseased hive. My last point is reached—the method of cure which I suggest.

About three years since, Mr. Robert Sproule, an Irish gentleman of culture, with whom I several times had had the pleasure of a conversation, mentioned to me that he had used phenol in the treatment of foul brood with some success. I replied that I would seek opportunities of experimenting, and if I found the result advantageous, I would do as I am always glad to do, mention his name with thanks for the suggestion. The suggestion was, however, not quite novel, but no one appears to have done more than think that phenol was out of the question: bees would not take it. This idea is correct. and I find by a letter received from Mr. Sproule, dated 18th ult., that he with the remedy in his possession, for want of noting the way of giving it, lost a large part of his apiary. Mr. Sproule's plan was to feed with syrup, into which he put a small quantity—how much I do not know—of Calvert's No. 1 Phenol. He says that in 1882 he was successful with it, "but"- I quote from his letter—"unfortunately I requeened all my colonies, save one of black bees, with Ligurians. The disease re-appeared, and as the Ligurian bees refuse to take the carbolized syrup, I lost them all by foul brood, except the black colony."

"What man has done, man can do" was my motto, and I sought opportunities of treating the pest, and up to the close of 1883 had so manipulated six diseased colonies that I felt convinced I had, with proper management, a remedy beside which salicylic acid was but vexation of spirit. I imagine that with Mr. Sproule's method I should have failed as he did, as I operated entirely on Ligurians and hybrids. Reference to my writings in the "Country" newspaper ten years since, shows that my argument has always been in favor of the remedy being given in the food. We have here a constant quantity; every grub must receive the same amount of nourishment, and if we can find a curative agent and the dose, the difficulty is accomplished. I wrote thus, seven years since, in speaking of salicylic acid: "When combs are in a very decomposed condition, they may have to be taken away, but I do not believe, rather I have not found, this step to be necessary. It is, in my opinion, far more necessary to remove the store; for, supposing, the honey to carry no infection, it is at least the means of preventing one remedy being given to the grubs. Remove the store; and the bees themselves become the dispensers of the drug which we have provided."

To place the food bottle with added phenol on the hive will, however, do nothing in the greater number of cases. If honey be coming in, the bees will not touch it; but open the hive, remove the brood comb, and pour from a bottle having a dropping-tube, loosely placed in its neck, the medicated syrup into those cells immediately around and over the brood, and the bees will and do use a curative quantity of phenol. The syrup is best poured in by holding the comb at about the inclination of ordinary writing, not by placing it on its side. (For tender combs an appliance may be made like a chemist's wash-bottle, by which the combs can have the syrup poured into them while they are in the upright position.) Sometimes it is enough to simply pour the syrup into the back comb, when they will fetch it into the brood-nest as needed, and the disease will disappear. But success comes through failure, and I had to experiment and destroy colonies in experimenting in order to find the curative dose. The vapor of phenol, the phenol being poured on blotting paper, on two occasions, killed all the brood. Last autumn I inoculated a colony and allowed it to get into bad condition. I then inserted a comb of store in the centre of the brood-nest and treated one side. The disease disappeared, but raged, although with abated fury, in the other half. Possessing a skep which might be scented from afar, I divided the combs by transferring into two of my colonies, and after allowing the disease to get ahead, quickly had them perfectly sound again.

I found that 1-200 was refused by the bees altogether; that 1-400 might be given constantly to a sound colony without appearing to limit the queen in breeding or touch her health; that 1-500 dispatched foul brood quickly even while honey was coming in, and that 1-750 appeared enough when it was not. I have established these quantities as the correct ones. I then, in the interest of apiculture, requested the British Bee-Keepers' Association to provide me with a bad case so that the attention of bee-keepers might be arrested. The colony has been supplied me by the kindness of Mr. Mills, and has been open to visitors, marked by Mr. Hooker, and officially attested. When it arrived on the night of June 21, it contained seven frames, only enough bees to cover two of them, and queen-cell afterwards found to contain foul-broody matter only, scarcely any living brood, and a good deal of dead brood. A casual counting of one of the best frames gave 371 dead LARVÆ on one side. The odor was pronounced. A case such as this would have been utterly hopeless on any plan but the one I am now advocating.

With me queenlessness presents the worst of all difficulties. No grubs, no physic, no cure. Unqueening a foul-broody colony is giving up at once, it is decapitating to cure the headache. I had stipulated that the colony should have a queen, so my difficulty was greater than I anticipated, and yet the colony is here to-day strong, vigorous, and healthy and has been so for a week past. No cell has been uncapped, and no diseased grub removed by me. My treatment has been, giving food and getting that food converted into bees as rapidly as possible.

Seeing, early next morning, June 22, the utterly disheartened condition of the poor bees, I went to a nucleus, took out a very fine Italian mother, having just proved as purely fertilized, and putting her under a dome cage on a card, placed the card over the frames. The bees came up and seemed to see in her a new hope. I lifted the card, she was welcomed, and the colony was now queened. I waited three days till she was regularly laying, giving them syrup phenolated by 1 in 500, and then took two frames from a colony containing the very comb once used in experimental inoculation to which I previously referred. The combs were ugly, and I wanted to be rid of them. They were full of brood. This step would not have been necessary, but from the fact that I required a strong, healthy colony by the time of the Congress. The bees were now shut up to four frames, and those behind the division-board, waiting introduction as the bees multiplied, smelt so badly (the weather being hot), that for comfort of myself and bees I was forced to spray with water 200, phenol 1. Every evening the medicated syrup was given. The smell vanished, the bees became active and earnest. The comb with 371 dead larvæ on one side was last added, and in six days I could only find five sunken caps in the whole of it. Now and again a grub took the disease, but quickly, perfect immunity was the issue. The brood is now as bright, pearly, and healthy as any I have ever seen. The hive has not been touched except for manipulation, and yet its bottom-board has been kept most perfectly clean by the bees themselves.

Here a caution is needful. Carbolic acid is an impure phenol, and is useless. (Phenylated soap of good quality with plenty of water is the best cleanser of hives and apparatus.) Carbolic acid contains creosote and cresols, and bees abhor it. Absolute phenol must be used. My fear is lest dealers should profess to supply what is required, and substitute a cheaper for an absolutely pure article; if so, difficulties will arise.

Pardon me in saying that I feel proud that I have been so fortunate as to contribute something to the science of the question, while I feel delight in that the worst difficulty of bee-keepers has almost ceased to be a difficulty. I could take an apiary in the beginning of March with every colony diseased, and by May 1, with but very little labor, deliver it up clean and strong, as strong as though the disease had never appeared. These experiments and investigations have cost me much in time, and money, and mental effort; but as they will, I feel assured, be the means of saving thousands annually to bee-keepers generally, I rejoice, and ask them to rejoice with me.

Acton, London, England. FRANK R. CHESHIRE.

By the apiarists of England the above is regarded as one of the greatest discoveries of the age. Phenol is carbolic acid, and must be *pure* to have the desired effect. We shall give more on this subject in future numbers of the AMERICAN BEE JOURNAL. To show how positive Mr. Cheshire is of its being an absolute cure, he says:

"I assert with all the positiveness I can command, that phenol, upon my plan, is a specific, and only needs a careful and correct application. And, best of all, no loss is occasioned; the food given stimulates and strengthens, as well as restores health, and a smitten colony will, from the little extra attention it gets, soon become probably the best in the apiary. This notion, too, about infected hives is largely a delusion. Burning is sheer folly. Boiling is utterly useless, for it would not kill the spores, if such were present. Washing with carbolized soap is all-sufficient."

CORRESPONDENCE.

For the American Bee Journal.

Statistics of the Honey Crop.

G. M. DOOLITTLE.

Much has been written during the last few years relative to a statistical report, regarding the honey production of our country, and all believing that such a report would be of great value to the bee-keepers residing in North America. To this end the National Convention, in the fall of 1882, appointed a committee to gather together all the individual reports possible from every State in the Union and Canada; so that these reports might be condensed into a suitable table, thus showing the extent of the honey-production of our country. Although the work of this committee was a partial failure, owing to various causes, still we have the table as given by Dr. C. C. Miller, on page 221 of the Bee Journal of 1883, which does much credit to the committee, and gives us, together with Dr. Miller's remarks on page 222, a fair idea of the honey-production of our country. Again, on page 51 of the same volume, is a report of the honey-production of the State of Illinois, as gathered by the assessors of that State, which is probably the most complete report ever published in the bee-papers.

Now, while these reports are of much value in giving the honey resources of our country, still they are not just what the wants of the honey-producer demands; inasmuch as they come too late to help us in marketing our product. What we want to know is, how much white honey there is in the country previous to Sept. 1 of the same year in which the report is collected, for nearly all of the disposing of our crop is done for the next six months after that date. Hence, it becomes almost a necessity that we have some reliable means of knowing what the crop of white honey is each year, previous to the time of selling, if we would dispose of our crop understandingly. Thus far, all of our statistical reports have not helped us in the least in this matter, in that they have been nearly a year behind the time that we have use for them. Some object to any one having access to a statistical report save the producers, but I think this a mistake; for we should be willing to "let live as well as to live." Thus the report becomes of as great value to the buyer as to the producer, and he should have the benefit of it to enable him to buy understandingly.

In the above, all will, I think, see the necessity of a reliable report on or about Sept. 1 of each year; but how we are to get such a report is the thing which has baffled us so far. I see by a late monthly bee-paper that there is talk of establishing a bee-keepers' bureau for this purpose, and if all will take hold of it, it may prove a good thing; although the thing as proposed looks like shutting out all but the producer, under a penalty of any producer who shall divulge any information to the merchant or consumer. I claim that the merchant and the consumer have as good a right to facts regarding the honey-production of our country as any one; and a staple market price for honey cannot be obtained until they do have that right.

A method for obtaining statistics which will benefit all, is what we want. I am led to give one which has already partially developed in the Bee Journal without any labor or thought being expended upon it—through the columns of "Our Letter Box." In these columns we find reports from nearly every State and country in the world, which reports are given free; so that no great expense is attachable to my plan. It was these reports and the cheapness of them which led me to study into the feasibility of obtaining a statistical report through them.

By taking a complete Postal Guide (the January issue) we find that the location of every county in every State is given by a little ⊙ with a point being attached to all of them except the circle for the central counties, which are left plain. The point is attached to the side of the circle, so as to designate the relative position of each county in relation to an imaginary division of the State. Thus, if a county is in the northern part of a State, it. is designated thus ♁, if south, thus ♀, etc.

Now, as I read the reports in "Our Letter Box" from the different States, I took my Postal Guide, and by the Post-Office given, found the county, and then found the relative position that this county held in the State, and thus I got a limited idea of the honey yield of that portion of the State. When several reports were given from one State, I got a limited idea of the yield of that State. Take the State of Indiana for instance: I find under date of July 28, a report from S. Hathaway of "less than one-half a crop," and by turning to the Postal Guide, I find that he lives in Delaware county, which is in the eastern part of the State. Under date of Aug. 3, B. F. Baldwin reports 60 pounds of honey per colony; he living in Grant county, which is in the central part of the State. Then J. M. Hicks reports from the northern part of the State under date of Aug. 15, "no honey;" while under date of Aug. 20, J. Sharp reports from the western part, "poor season for honey." Could I get a report from the southern part of the State, I would have the report from five different parts of Indiana. But as it is, I have only a report from four parts from which to summarize.

In summarizing, I call an average crop 50 lbs. of comb honey, per colony, or 75 lbs. of extracted; but as none of these reports say whether the honey is comb or extracted, I must guess them at one-half of each, hence 62 pounds is an average crop. Mr. Hathaway says "less than one-half," which would be 30 pounds; Mr. Baldwin says "60 pounds;" Mr. Hicks says none; while Mr. Sharp says "poor season," which I call 15 pounds. Add these together and I have 105 pounds, which, divided by the number reporting, or 4, gives 26 pounds as the average yield of honey per colony in the State of Indiana, or a little more than one-third of a crop. In this way I take all of the States reporting, and summarize the whole United States and Canada, when I find the yield for 1884 is below an average yield.

Now, if we consider that only those who get large yields are given to reporting, we must reduce this amount about one-third, when I *guess* that the crop of 1884 is about two-thirds of an average yield, which guess I will wager is not far out of the way. But, says one, "we want no guessing in the matter." True, and the reason we had to guess was, because so few volunteered to report. However, the plan was what I was after, not the guessing at the 1884 crop; for the plan can be made to produce a reliable report.

About Aug. 1, let the Editor of the Bee Journal, or any one interested to the amount of about $5.00, write a postal card to bee-keepers who take the Bee Journal, and who live in the central, north, east, south, and western part of each State (or print the cards when $5.00 will cover the cost) to collect the reports of at least one bee-keeper in each county which he thinks is covered by his territory, or have that bee-keeper summarize reports in his own county, when a summarized report of such counties is to be sent to the Editor of the Bee Journal.

He will now have about 200 to 250 summarized reports which he can summarize by States, and again as a whole, giving it in the first issue of the Bee Journal for September. Thus we shall have a report of all the average yields of white honey, in time to be of value to us. All will be looking forward to this report as a guide to their future actions regarding the buying and selling of the crop. All will have sufficient interest in the work to cause them to take action in it.

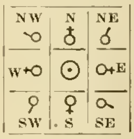
Most bee-keepers know the amount of the crop in their respective counties, as early as Aug. 10, and a report could be made out with but little writing, save to the one who is to send the report to the Bee Journal; bee-keepers, as a rule, are a set who tell their bee-keeping neighbors of their welfare. I had heard from nearly all the bee-keepers, in this county, previous to Aug. 10, this year; and the highest report was 50 pounds per colony, while nothing was reported by others. A summarized report of the county would give an average yield of 18 pounds to each colony in the spring. Then I had letters from Cayuga, Cortland, Madison, Oneida, Tompkins and Chenango counties, which would bring the average yield of the honey crop in Central New York down to about 16 pounds per colony, or less than one-third of the average yield, as given by practical bee-keepers in this section, for the past ten years. If, added to such a report as the above, we could have a reliable census report every ten years, showing the growth or decline of our business, it seems as if all might be satisfied.

If my plan is looked upon with favor, and it is so desired, I will see to the getting of a report from Central New York, and would suggest Ira Barber, De Kalb, N. Y., to look after a report of the north part of the State; J. H. Martin, Hartford, N. Y., for the east; M. A. Williams & Co., Berkshire, N. Y., for the south, and G. W. Stanley, Wyoming, N. Y., for the west.

Now, fellow bee-keepers, let us take hold of this thing in some shape, and have a report each year in time to be of benefit to us. If my plan does not look feasible to you, give your plan, and let us take action on the plans till we strike one that is feasible. If my plan is considered as a good one, then let some one from each State volunteer to do his part of the work, and suggest names from the other parts of his State as I have done; so that by next July we may get the thing in working order.

Borodino, N. Y.

[This plan looks more simple and practical than anything heretofore suggested. We have procured a lot of the marks, and will use them for awhile and see how the plan will work. This diagram will represent a



State, and the 9 points of compass will be indicated as shown. One of these marks will be put after each person's name, to show in what part of the State he resides.—Ed.]

For the American Bee Journal.

That Strange Noise—Shiny Bees.

WM. MALONE—23–37.

This has been a peculiar season for honey. The forepart of it was promising, and did tolerably well up to July 10, and then the storing of surplus honey was ended for the season of 1884. But the bees still kept up breeding, and showed no signs of robbing until Sept. 20; since then we dare not open a hive. From 23 colonies I have extracted 1,100 pounds, and have taken some 25 or 30 one-pound sections, which contained white clover honey and honey-dew mixed, and I sold it at 8⅓ cents per pound. I think that the honey-dew in this county is caused by small, green insects, the most of them being invisible to the naked eye. On page 620 is a question by Dr. J. N. Smoot, in regard to a peculiar sound heard in one of his bee-hives, and Mr. Heddon gives it up. This peculiar sound is caused by the drones at the time when the bees drive them out of the hive. Bees seldom, if ever, sting the drones, but they starve them to death. This noise I have often noticed, and have, on examination, found the drones covered up in the hive and making this noise. You will have to open the hive very carefully if you want to see them making this noise; and you will pity them when you realize that they are starved to death. On the same page Mr. H. J. Northrup asks a question about shiny or black bees. I have had the same in my apiary, more or less, every year since I have been in the bee-business, which is 5 years. They are old bees, and we find them in our strongest colonies. We need have no fears as to the future prosperity of these colonies. To explain: If a queen lays 2,000 eggs in 24 hours, of course 2,000 bees must die of old age in the same length of time. Old bees sometimes die on the floors and sometimes in the hive at night, and some are carried away from the hive in the day time. Another reason, I think, is that strong colonies are more liable to rob, and in this way become shiny and worn out sooner than they would if working in the field. I have seen lots of such bees that were not much larger than large, black ants, and some that had no stinger. This, I think, proves that they have been in mischief somewhere. Still another reason: Queens that are extra prolific will lay more eggs than the colony can properly care for, and, of course, the bees will die sooner than if they had been properly cared for in the larval state. Let me second Mr. G. W. Demaree's plan of obtaining surplus honey, as given on page 619. That is the way that I do just before basswood blooms. I take the queen and enough bees and brood with which to start a nucleus; or if the queen is old, destroy her, and then give them all the room that they need. In this way, in 1882, I got 200 pounds per colony, from 10 colonies, in 16 days.

Oakley, Iowa, Sept. 26, 1884.

For the American Bee Journal.

Southern Wisconsin Convention.

The convention met at the Court House at Janesville, Sept. 23, 1884, in an equinoctial storm. The meeting was called to order by President C. O. Shannon. The usual order of business was transacted, and statistics were taken. In looking over the incomplete table, we find that the amount of comb honey is more than double that of extracted. The best average yield was 121 pounds of surplus comb honey per colony, and an increase that more than doubled the number of colonies.

The most important honey-producing plant is white clover, and it has furnished nearly all of the surplus honey. Fruit bloom furnished enough to stimulate the bees and start breeding. The honey-dew was in great abundance in some localities for a short time; however, the quantity gathered was not large. The golden-rod, of which there are many varieties in the district, bloomed well, but it furnished no surplus. Buckwheat is reported as having produced little or no honey. The surplus-honey harvest commenced with June, and practically ended about the middle of July.

The convention indulged in a hearty discussion on some of the many knotty problems which bee-keepers have to solve. The following are some of the questions asked and answered: "What kind of bees build the straightest combs without the use of separators?" The prevailing opinion was in favor of the native or black bees.

"What kind of bees are easiest to handle when swarming?" The black bees, because they hang to the cluster, and are less liable to sting.

"Is doubling up colonies, in the fall, advisable?" Doubling up colonies which are weak is advisable.

"What is the best way to prevent swarming?" Swarming may be prevented by keeping the drones killed off, or by extracting the honey. Should a swarm issue, return it to the hive, and destroy the queen-cells every week.

"Are any pure Italian queens known to be black?" Yes; some are quite black.

"What width of section is best adapted for securing straight combs without the use of separators?" Sections which are 1¾ inches wide.

"How do you get the bees out of surplus boxes?" Drive all the bees that you can below with smoke, then take off the boxes and carry them into a dark room, leaving the door partly open; all remaining bees will return to the hive.

"Is it advisable, on the whole, to encourage beginners?" Some complain that there is a tendency, on the part of amateur bee-keepers, to dispose of their surplus honey at dealers' prices, which, of course, is always low, and sometimes below the actual cost of production. They put their honey on the market in every conceivable shape, and are willing to "take it out in trade." The price is established, and the man who depends upon bee-keeping for his bread and butter must hold his honey until this lose product is consumed; or if obliged to sell, then he must do so at a great sacrifice. It is agreed that 12½ cents for extracted, and 15 cents for comb honey is very cheap, and that anything less is ruinous to the business.

Exhibits of aparian supplies were furnished by a member from Illinois. The samples of foundation were very fine. Also a frame of wired foundation. The top-bar of the frame was nearly square, being a substantial support for the comb when filled with honey. The top bar of some frames are so light that unless supported in some way, they will sag when filled with honey, and are liable to be broken when taken out of the hive.

The table of statistics will not be completed until our next meeting, which will be held at the Court House in Janesville, on Oct. 28, 1884, at 10 a.

m. At that meeting the best methods of wintering bees will be discussed.

J. T. POMEROY, *Sec.*
C. O. SHANNON, *Pres.*

For the American Bee Journal.

Bee and Honey Show at London, Ont.

WM. H. WESTON.

The bee and honey show at the Western Fair, which was held at London, Ont., during last week, was far from what it should have been. I had been led to suppose that if the directors would only give a good premium list, that the bee-keepers of this section would make a very large display, but my anticipations were far from what was realized. The exhibit, although small, was very tastily arranged on the shelves prepared for the purpose, in a neat building kindly set apart for the bee and honey show.

Upon entering the building the first exhibit was that of Mr. Jos. Aches, of Amiens, who had the largest show of comb honey in the building. He also exhibited extracted honey, queens, beeswax, and a full colony of bees. His exhibit was a very attractive one, and calculated to teach the public that advanced bee-keeping has come to stay, and that by careful attention money can be made at the business. His exhibit of queens of his own rearing, was splendid.

The next was that of Mr. D. P. Campbell, of Parkhill. who showed a large amount of extracted honey, also comb honey, hives, queens, extractors, smokers, etc.; also an Olm comb foundation mill, and foundation with it. Mr. Campbell displayed very fine queens of his own breeding. I might say that Mr. Campbell is President of the North Middlesex Bee-Keepers' Association.

Mr. G. B. Jones, of Brantford, representing E. L. Goold & Co., next attracted our attention, and pleases us very much with his large show of apiarian supplies. It was the most comprehensive exhibit ever shown in this part of Canada. Mr. Jones was kept very busy all the week explaining the many articles used by bee-keepers. It is not necessary to mention that he had to explain a great many times that his honey extractor was not a new style of "churn" or "ice cream freezer;" or that his wax-extractor was not a "coal-oil stove."

We now come to a very nice display of extracted honey in Gem jars, which, I have no doubt, made many thousand mouths "water" during the week, as it looked simply delicious. Mr. Smith, of Ealing, who has it, says that the people like to see what they buy, and, therefore, glass jars are the best for the purpose. He also showed hives, both wax and honey extractors, and a very fine cake of wax. Mrs. John Rudd, of London, Ont., exhibited a quantity of extracted honey on which she took the first prize. Mrs. Wm. Bigg, of Granton, also took the prize for comb honey.

Mr. John Rudd showed hives, extractors, smokers, bee-feeders, etc.; also queens and a full colony of Italian bees. He did a large trade in selling honey by allowing persons to eat what they wanted to for 5 cents each, which caused much merriment for the spectators. Many thought that they could eat more than what was set before them, but went away satisfied.

Mr. Alex. Scott, of Ealing, displayed a honey cake, honey vinegar, and comb and extracted honey. There was also a number of other exhibits, but nothing worthy of special remark. The North Middlesex Bee-Keepers' Convention was to have been held during the week, but the other attractions were greater, and only a small number made their appearance, who held an informal meeting in the hall of the Masonic Temple, where they talked over matters pertaining to bee-culture to the edification of all present.

London, Ont.

For the American Bee Journal.

Bee-Diarrhœa—Hot Weather.

B. F. CARROLL—115.

I wrote an article for the BEE JOURNAL about April 1, giving the condition of my bees at that time, with my experience on the pollen theory as advanced by Mr. Heddon; but, as so much had been already said, I thought I would not send it, and as I see a statement in the late number of the BEE JOURNAL, that bees are not bothered with diarrhœa South of Kentucky, I write to correct this mistake.

It is true that we bee-keepers "down South" have no long winters and severe freezes to keep our bees confined longer than eight to twenty days at a time. Our bees are not often bothered with "spring dwindling" and diarrhœa, but last winter they began bringing in pollen on Feb. 2, and continued to do so up to Feb. 12, during which time the queens began laying rapidly, and everything was lovely. The mercury stood at 65° Fahr. in the shade. A regular Texas norther comes howling from the northwest with sleet and hail until the ground was covered with ice. The mercury went down to 20° Fahr., and my bees were confined six days. The cold broke off as suddenly as it came up, and the bees all tried to come out at once. The earth was fairly sprinkled with little worm-like pollen-masses voided by the bees, showing plainly that every colony (80) in the yard was diseased; and had the cold lasted ten days longer, I truly believe that every colony would have died. One colony was attacked by robbers, and in order to keep it down, I tacked a piece of wire-cloth over the entrance, and put on an empty story above, after removing the enamel cloth, so the bees could have all the air that they needed.

I did not look at them again for two days, when I found that nearly all of the bees were dead or dying. The hive was badly besmeared with the same pollen-masses, only thinner, and what few bees that were left, were so badly swollen that but few of them could fly. The proof is this: That a colony must first start to brood-rearing—active for awhile, and then suddenly stopped by cold, with plenty of pollen and confinement—and diarrhœa is inevitable. Pollen, confinement and cold is the true cause of bee-diarrhœa; and if the Northern bee-keepers can overcome one or all of the above by plenty of warm packing and warm rooms. I think that they may be able to winter their bees well.

An item about the weather. Early in June the rains ceased, and it is still dry. For 68 days the thermometer has shown 100° Fahr. and upwards. Aug. 29 was the hottest day ever known in Texas. Pop-corn, in the ear, popped in the fields. I lost over 200 frames of comb by melting down, and the hives were in the shade of peach trees. Many combs built on wired frames, melted down as badly as those without wires. The bees were gathering honey-dew at the time very rapidly, and the hives were all full. As soon as I discovered that the combs were tumbling, I began to throw water on the hives, and by this means I partially kept down robbing. I lost only 4 three-frame nuclei. The thermometer at 4 p. m. indicated 107° Fahr. in the shade. On every day of September the mercury has been from 100° to 103° Fahr. in the shade; to-day, Sept. 22, it was at 102° Fahr.

Dresden, Tex.

For the American Bee Journal.

Kentucky State Convention.

The Kentucky State Bee-Keepers' Association met in Helm's Hall, at Eminence, Ky., on Sept. 2, 1884, and was called to order by President Demaree. Mr. E. Drane was elected Secretary *pro tem.* In the absence of the Secretary the calling of the roll and reading of the minutes of the preceding meeting was dispensed with. The attendance was slim.

President Demaree explained the action of the committee on the honey resources of Kentucky. It was the wish of those present that the committee endeavor to raise money to have the report published in pamphlet form. The President delivered a short and interesting address.

Rev. L. Johnson, of Walton, Ky., was unanimously chosen President for next year; Wm. Cook, of Bowling Green, Vice-President; J. T. Connelly, of Sherman, Secretary; J. B. Nalt, of Louisville, Treasurer.

The following gentlemen were appointed County Vice-Presidents to look after the interests of bee-culture in their sections, and report to the next meeting:

W. P. Gibson, Grant Co.
Geo. L. Beach, Kenton Co.
Dr. N. P. Allen, Smith's Grove.
W. F. Storm, Lexington.
A. W. Stith, Dividing Ridge, Pendleton Co.
G. W. Ashby, Valley Station, Jefferson Co,
W. B. Moody, New Castle, Henry Co.
Enoch Brown, Little Mount, Spencer Co.
Wm. Wilson, Nelson Co.
E. Drane, Eminence, Henry Co.
R. M. Argo, Paint Lick, Garrard Co.
W. T Stuart, Madison, Ind.

Covington, Ky., was chosen for the place of the next meeting, and the time Sept. 23 and 24, 1885.

E. DRANE *Sec. pro tem.*
G. W. DEMAREE, *Pres.*

SELECTIONS FROM OUR LETTER BOX

Strange Noise in a Bee-Hive.

I think that the strange noise of which Mr. J. N. Smoot speaks, on page 620, is the result of the workers trying to drive out the drones, and the latter getting into some hollow place, make the noise referred to. I have heard the same thing, and have come to the above conclusion.

A. F. Robson.

Italy, N. Y., Sept. 29, 1884.

My Report for 1884.

Another honey season has passed, and as the reports of the season are in order, I will give mine also. Last spring almost all of the bees were not in a very good condition, the most of them being somewhat weak, and it took half of the season for them to get sufficient bees to work in the sections, excepting the Syrians which were ready for the honey harvest, and they commenced to work in the sections a month before any of the Italians and hybrids began. The Italians and hybrids gathered only about 30 pounds of honey, while the Syrians and Syrian-hybrids gathered from 50 to 80 pounds per colony, and the honey season was not as good as that of last year. I think that the Syrians are the best bees that ever landed on the American shores. It was almost too cold here all summer for bees to work, so I got only about one-half of a crop of honey. To-day I received a fine Syrian queen from Mt. Lebanon in Syria. After a journey of 21 days she was as lively as if she had just been taken out of the hive, and only about a dozen bees were dead.

L. A. Lowmaster.

Belle Vernon, O., Sept. 20, 1884.

A Poor Season.

The season here was a fair one up to June 25, when it turned cold and remained so during basswood bloom, which was plentiful enough in this immediate locality, but there was too much cold, northwest winds to receive any honey from that source. Bees built up nicely on fruit bloom, and then filled up the hives with honey-dew; then came white clover which was mixed more or less, thus damaging what little surplus that was obtained. I have heard several complaints from parties purchasing honey that they could not eat, or was very poor stuff. Since June 25, bees have barely obtained a living, and there is not a drop of fall honey. They will have to be fed some for winter. The honey-flow seems to be in spots throughout this part of the country, as some bee-keepers in favorable localities have secured a fair crop, but, as a whole, the season is a poor one. Our County Fair held here during the past week, was a grand success. The Society coming out enough ahead so that they will be enabled to put improvements on the new grounds purchased this season. The bee-keepers' display was good for as poor a season as we have had. There was a lady bee-keeper who exhibited an observatory hive made by herself, which attracted considerable attention. With better accommodations, and an enlarged premium list, we hope, if possible, to make a much larger display next fall.

A. M. Gander.

Adrian, Mich., Sept. 29, 1884.

Report for 1884.

I commenced the spring with 68 colonies of black bees; increased to 110; and they produced 4,200 pounds of comb honey, and 1,000 pounds of extracted. How is that for a poor season?

J. Hodgson, Jr.

Pewaukee, Wis., Oct. 1, 1884.

[Good enough.—Ed.]

Season Almost an Entire Failure.

We had about one-half of a crop of honey in 1883, but this season is almost an entire failure. Bees came through the winter healthy and strong. Fruit bloom was very abundant. We have some 700 apple trees besides cherry and plum trees. There was as good a stand of white clover as I have ever seen, and it was in bloom rather longer than usual. Other honey-plants were about as usual, and yet little or no surplus honey was stored.

S. S. Keigwin.

Springfield, Ill., Sept. 29, 1884.

Apiarian Display at New Orleans.

I am appointed by the Agricultural Department of the United States to make an apiarian display at New Orleans in connection with their collections. The exhibition will not be large, but I shall aim to show that which will be the most instructive: Hives, apparatus for surplus honey, honey in all forms to ship and in market, and all kinds of apparatuses and material used or produced in the apiary. If any bee-keeper thinks that he has that which will be instructive, and is new or peculiar, I shall be glad to hear from him. I am given but little means for this object, and I desire to limit the exhibit to the practically useful. I shall also be glad of suggestions.

A. J. Cook.

Agr'l College, Mich., Sept. 26, 1884.

Report for the Season.

This has been the best season for the production of honey from fall flowers, that I have ever known. The yield from white clover was small, but enough, however, to keep brood-rearing going constantly forward. Goldenrod began to show itself about Aug. 28, and from that date till Sept. 22, my bees have been fairly rushing it into their hives. I have been obliged to extract every week; my practice being, not to extract at all until capping is commenced in the upper part of the combs; thus I am assured of well-ripened honey. The honey, too, this season, from goldenrod, is exceedingly light in color; in fact, almost as light as that from white clover, although not as limpid in appearance. I have found it so heavy that two or three samples tested by weight, pulled down the scale at 14¼ pounds to the gallon. My entire surplus comes from fruit bloom gathered in early spring, and goldenrod this fall. I had 8 colonies last spring, sold 6 and delivered them before May 25, increased to 10 strong colonies well prepared for winter, and have over 900 pounds of honey besides. I give this report to show what the possibilities are in a poor locality, but beginners must bear in mind one thing, viz: that I have devoted some 18 years to the study and practice of apiculture, and have applied the experience thus gained, to the care of my little apiary. What I have done, others can do equally as well; but in order to make even a partial success of apiculture, requires hard study, hard work, and more than all else, the knowing how to do the right thing at the right time and doing it.

J. E. Pond, Jr.

Foxboro, Mass., Sept. 25, 1884.

St. Joseph Co., Ind. Convention.

The convention of St. Joseph county, Ind., bee-keepers assembled on Saturday, Sept. 27, in the commissioners' room at the Court House. W. D. Rockhill acted as temporary chairman, and presided over a good-sized body of men interested in bee-keeping. Mr. Geo. H. Stover, of Centre township, acted as temporary Secretary. The morning session was devoted to the treatment of general topics of interest to those engaged in bee-keeping. The convention adjourned to meet at 1:30 p. m., after appointing a committee on permanent organization and one on constitution and by-laws.

The committee on constitution and by-laws reported at its afternoon session, through its chairman, A. J. Hatfield. The report was adopted.

The following were selected as officers of the convention: President, A. J. Hatfield; Vice-President, Wm. D. Rockhill; Secretary, Geo. H. Stover; Treasurer, A. Lindley.

The name decided upon was "The Bee-Keepers' Association of Northern Indiana."

☞ A. J. & E. Hatfield, the well-known bee-breeders of New Carlisle, have a novel and tempting exhibit in Exposition Hall, consisting of honey in the comb, as well as extracted. There is a pyramid of white-clover honey in boxes on one side of the booth, on the other side honey from the basswood blossom, and on the other side, honey from fall flowers. A colony of industrious Italian bees is among the collection, and through the glass sides of the box, the bees can be seen at work. The Messrs. Hatfield are practical bee-men, and have some 200 colonies.—*South Bend, Ind., Tribune.*

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Oct. 15.—Northern Ohio, at Norwalk, Ohio.
H. R. Boardman, Sec.

Oct. 22.—N. W. Ind., at Laporte, Ind.
A. Fahnestock, Sec.

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Oct. 28.—Southern Wisconsin, at Janesville, Wis.
J. T. Pomeroy, Sec.

Nov. 10.—Will County, Ill., at Beecher, Ill.
Gustavus Kettering, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Honey for Bees in Winter.

Will Mr. Heddon please answer the following questions:

1. Is buckwheat honey good for bees to winter on?

2. As a general thing, is the honey produced this year going to be very good for bees to winter on?

3. Is it necessary to put a quilt over the bees, when wintering in a cellar where the temperature can be kept at from 45° to 50° Fahr.?

4. Is it best, or not, to leave off the upper story with all the combs taken out? Wilson Sherman.

Chester Centre, Iowa, Sept. 29, 1884.

Answers.—1. So far as my experience and observation has gone, it is.

2. I can only answer for my own location, and that answer is, yes.

3. A quilt will not cause or prevent bee-diarrhœa, which is our only successful winter enemy. I am of the opinion that it is of little value.

4. I presume that you mean to leave the upper story "on" and not "off." While I do not think that it would do any harm, I have not enough faith in its possessing any benefit to advise having it to carry and take up room in the cellar, though I must confess that I do not know. I only know that bees will have diarrhœa and die both with and without this empty super over the brood-chamber, for I have tried it. Neither theoretically nor practically have I any reason to think that colored honey has any tendency to produce the disease because of its color. Here, we have three surplus honey crops each year, and more than half of the time have August, colored honey to winter the bees on, and we do not have any more disease when we winter them on this weed honey than when wintering on pine, basswood and clover honey. It is my opinion that the consumption of pollen during confinement, is the cause of the disease, and that often the honey contains this pollen to some extent in cells that have bee-bread in their lower half, and honey in the upper half. When we learn the cause and prevention of bee-diarrhœa, then we shall readily learn the beneficial and detrimental effects of all the other conditions, such as ventilation, etc., upon the quantity of food required to bring the colonies through in the strongest condition.

Cellar Ventilation.

Please inform me through the Bee Journal whether or not I can properly ventilate my bee-cellar (18x24 feet) by two pipes connecting with the outside atmosphere, both at the top of the cellar, but one is a short pipe and the other extending to the bottom of the cellar. Is the method practical? and are the pipes sufficiently large, each being 2 inches in diameter. Subscriber.

Answer.—This subject is one upon which I lack experience. I know of no person who has had enough to warrant a reasonable reply. As it is a fact that bee-diarrhœa is the cause of our loss of bees in winter, and also that bees have it, and do not have it, in all sorts of cellars and out-of-doors, with and without all manner of both cellar and hive ventilation, how can we ever find out what sort of ventilation is best for bees until we first learn how to prevent that devastating disease? I should think that your two ventilation pipes would ventilate your cellar sufficiently; but because your bees go through the coming winter in nice condition, will not prove it. It will only prove that it will do, other things being all right. Again, should your colonies all die with diarrhœa, that will not prove that your ventilation is imperfect. I have known a whole apiary to come out in the spring in perfect health with very bad or no ventilation, and again, nearly all to die with diarrhœa in cellars that were well ventilated.

Convention Notices.

☞ The Tuscarawas County Bee-Keepers' Association will hold its next meeting at the apiary of Geo. F. Williams, in New Philadelphia, O., on Thursday, Oct. 23, 1884.

G. F. Williams, *Sec.*
A. A. Fradenburg, *Pres.*

National Bee-Keepers' Association.

As has already been noticed, the next annual meeting of the North American Bee-Keepers' Association will be held in the city of Rochester, N. Y., Oct. 28, 29 and 30, 1884. Essays will be read as follows: "Wintering Bees," by W. F. Clarke, of Canada; "Nectar," by Prof. A. J. Cook, of Michigan; "Marketing Honey," by Thos. G. Newman, of Illinois; "Foul Brood," by D. A. Jones, of Canada. The committee has decided to use the balance of the time in discussing these and other questions of importance. Those who cannot be present, and have questions that they desire to have discussed or answered, will please send the same to the Secretary, Dr. C. C. Miller, of Marengo, Ill., or to Rochester; in care of the convention, on or before the first day of the meeting. Notice as to place of meeting will be given hereafter.

C. C. Miller, *Sec.*
L. C. Root, *Vice-Pres.*

Convention at Chicago.

☞ The Northwestern Bee-Keepers' Association will hold its fifth annual convention at Owsley's Hall, northwest corner of Robey and West Madison streets, Chicago, Ill., on Wednesday and Thursday, Oct. 15 and 16, commencing at 10 a. m. on Wednesday, and holding five sessions. Those who have attended one of these annual re-unions will need no urging to induce them to come again; those who have not, should remember that Father Langstroth characterized the last meeting as "representing the largest number of large, practical and successful honey-producers of any convention that he had ever visited." This meeting being held during the Inter-State Industrial Exposition, reduced railroad fares may be had on nearly all of the railroads. W. Z. Hutchinson, *Sec.*

C. C. Miller, *Pres.*

☞ The Northern Ohio Bee-Keepers' Association will hold their next meeting in the Council Chamber at Norwalk, O., on Wednesday, Oct. 15, 1884. H. R. Boardman, *Sec.*

☞ The Northwestern Indiana Bee-Keepers' Association will hold their annual meeting in the city of La Porte, at Lay's Opera House, on Wednesday, Oct. 22, 1884, beginning at 10 a. m. Essays will be read as follows: "The preparation and wintering of bees in the cellar," by G. R. Tyrrell, President; "The profitable use of comb foundation," by Dwight Furness, Vice-President of Porter County, Ind.; "The preparation and wintering of bees on the summer stand," by A. Fahnestock, Secretary; "Introducing queens and how to get rid of fertile workers" will be subjects for discussion. A full attendance is requested. Ladies are specially invited. A. Fahnestock, *Sec.*

G. R. Tyrrell, *Pres.*

Special Notices.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

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TRIAL SUBSCRIBERS.—The Weekly BEE JOURNAL will be sent to any *new* subscriber in North America from now until the end of 1884 for 25 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

◆

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Oct. 6, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX—Is dull at 26@28c on arrival.

C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11½@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c.. buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—No movement of consequence. Stocks are of fair proportions, but are in some instances limited to figures not obtainable. Choice extracted is in demand at the quotations below noted. White to extra white comb, 9@11c.; dark to good, 7@9c.; extracted, choice to extra white, 4½@5c,; dark and candied, 4c.

BEESWAX.—Wholesale, 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—Our market is at present overstocked with honey, large quantities having been brought in wagons, and every place is filled up. Some lots have sold as low as 9c. for 1-lb. sections of white comb. We have not changed prices, but find sales very slow at 16c. for best white 1-lbs., and 14c. for 2-lbs. Dark honey we are offering as low as 10 to 12c. without being able to effect sales. Extracted is not wanted at all, and no sale at any price.

BEESWAX.—28@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

GEO. W. MEADE & CO., 213 Market.

KANSAS CITY.

HONEY—There has been a good demand with liberal receipts, and prices remain the same. Choice Eastern comb, ½-pound sections, 18c; 1-pound, 16c; 2-pounds, 15c. California comb, 2-pound sections, 15c. Lower grades are slow at 2 or 3 cents less. Extracted, 6½@8c, according to quality.

BEESWAX—None in the market.

CLEMONS, CLOON & CO.
Successors to Jerome Twichell.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Book Notices.

☞ MRS. EMMA D. E. N. SOUTHWORTH, the author of "SELF-RAISED; OR FROM THE DEPTHS," published this day by T. B. Peterson & Brothers, Philadelphia, considers it to be the best work she has ever written. In it, the hero rises from the depths of poverty, misery and humiliation, and to trace his progress, step by step, has been with her a labor of love. There has been a curious blending of realism and romance in this work—the result, it may be, of the leading incidents having occurred in actual life. It contains 658 pages. Price 75 cents.

☞ We have secured a copy of the AMERICAN ANTIQUARIAN AND ORIENTAL JOURNAL, which has come to be recognized as authority on the subject of archæology. We have been much interested in its perusal. It is edited by Stephen D. Peet, and is published at Clinton, Wis.

OGILVIE'S HANDY BOOK of Useful Information, is the title of a modest little book of 128 pages we have just received, which contains more information of practical value than many books that cost from $2.00 upwards. It contains statistical tables of practical value for every department of human effort. The Political, Historical, and Biographical information alone, is worth double the price of the book. It is bound in handsome leatherette, flexible covers, and will be sent by mail for 25 cents; or bound in silk cloth for 50 cents, by J. S. Ogilvie & Co., Publishers, 31 Rose Street, New York.

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We will mail **THE RURAL HOME** for three months ON TRIAL, to any address on receipt of only **10 cents** to help pay postage, packing, etc. Or for 30 cts., silver or stamps, we will mail **THE RURAL HOME** for one year. To any person sending us a club of four 30 cts. subscriptions we will send a sample of silver-plated ware premiums, choice of Sugar Shell, Salt Spoon, Mustard Spoon, Butter Knife, Solid Gold Propelling Pencil, Gold Thimble, etc. Or we will send, for four 30 cts. subscriptions, a copy of any of the Poets in 12mo. volumes illustrated, and handsomely bound in cloth, fifty authors to choose from, including Burns, Milton, Shelley, Shakespeare, Pope, Tennyson, etc. Or to the ladies, we will give a copy of the "Ladies' Manual of Fancy Work," an illustrated guide to all kinds of needle work, containing over 400 illustrations. The above goods are *warranted first-class*, and if not satisfactory we will refund money. Address,

THE RURAL HOME, Philadelphia, Pa.
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DOGS Do you want to buy a Fine-Bred DOG, of any kind? If so, write and name the kind you want.

Edmund Maurer, 1026 Spring Garden St.
41A eow4t **PHILADELPHIA, PA.**

Sixth Thousand Just Published !

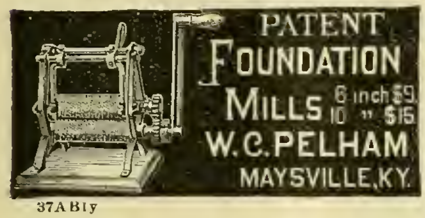
New and Enlarged Edition
OF
BEES and HONEY,
OR THE
Management of an Apiary for Pleasure and Profit; by
THOMAS G. NEWMAN.
Editor of the Weekly Bee Journal.

925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00 ; in paper covers, 75 cents, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**



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PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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We want an agent and local reporter in every community to represent **City and Country**, and furnish us from time to time such facts as we may require. Send 10 cents for credentials and full particulars regarding services and compensation. Address, Will C. Turner & Co., Publishers **"City and Country," Columbus, Ohio.**
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All persons who have lost Real Estate in Iowa, by reason of TAX OR JUDICIAL SALES, are invited to correspond with **BICKEL & BULL**, Attorneys at Law, 41 First Ave., **Cedar Rapids, Iowa**, and they will learn something to their advantage.

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by
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For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to
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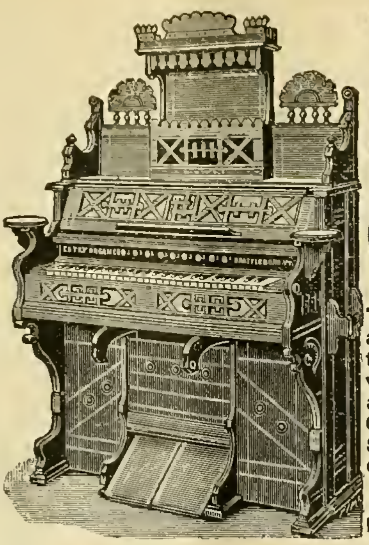

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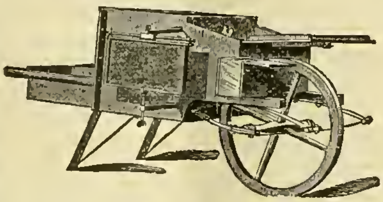

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REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only............$18.00.

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Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
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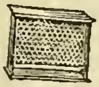

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J. VAN DEUSEN & SONS,
Sole Manufacturers,
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GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
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HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, **and is sent by mail, post-paid, on receipt of price.** This is just the Book that every family should have.

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What to Eat,
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Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness.
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Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause &
Malarial Affections,
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Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills !

Price only **25** Cents. Sent by Mail, post-paid,
THOMAS G. NEWMAN,
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150 Colonies of ITALIAN BEES
FOR SALE.

They are in Langstroth portico-hives, with standard L frames. All in first-class condition, with from 20 to 30 pounds of good honey for winter. The combs are all straight and all worker, and are built mostly on wired frames. In lots of 1 to 10 at $4.50 each ; 10 to 25 at $4.25 each ; 50 or more, at $4.00 each.
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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

60 Colonies of Bee for Sale!

They are in Heddon's, new Langstroth and Gallup hives, well painted, and contain from 25 to 40 lbs. of honey each. Price per colony : Black, $4.00 ; Hybrid, $4.50 ; Italians, $5.00. Send me your order and I will try to please you. In order on cars at above prices.
W. J. Fisher, Hamler, Henry Co., Ohio.
41A1t

1868. 1884.

HEDDON'S COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax NOW to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

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Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from	$ 3 00
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Untested, after July 1st	1 00
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CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

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Owing to a decline in the price of Beeswax there will, hereafter, be a reduction of **5 cents per pound** on all orders for Comb Foundation.

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INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,
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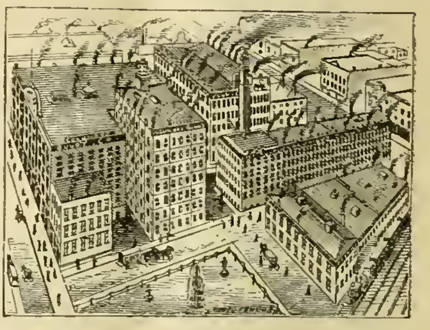

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American Village Carts,

the latter most perfect and free from horse motion.

☞ We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 18 cent stamps, in a letter to the COLUMBUS BUGGY CO., Columbus, Ohio, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

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Vandervort Comb Fdn. Mills,

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OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., October 15, 1884. VOL. XX.—No. 42.

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **50** cents.

Entered at the P.O. as Second-Class matter.

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Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

A. H. NEWMAN, Chicago, Ill.,
C. F. MUTH, Cincinnati, O.,
JAMES HEDDON, Dowagiac, Mich.,
DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.,
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH, Smyrna, N. Y.
C. F. DALE, Mortonsville, Ky.

and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
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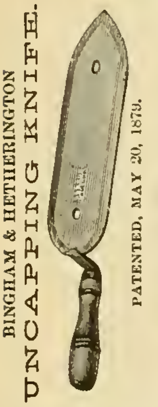
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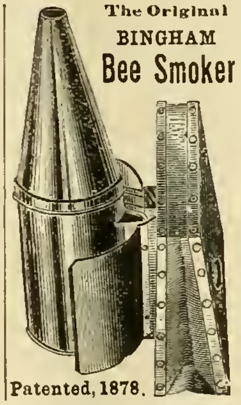

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Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

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Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

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Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

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Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., OCTOBER 15, 1884. No. 42.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

Only Used for Adulterating.

Mr. E. C. Jordan, of Virginia, has sent us the following article from the Virginia *Standard*, and desires it answered in the BEE JOURNAL:

> The fact that the firm of Candiani & Giannini were preparing to engage in the manufacture of syrup, or glucose from potatoes, has caused considerable inquiry into the uses of the article. The manufacture of it has not been attempted in this State before, so far as we can learn, but it is made extensively in the Western States, from corn, etc.
>
> It is used mostly as an *adulterant* in the manufacture of table syrups and in *adulterating* the dark, moist sugars used largely by the poor. Its next largest use is in the manufacture of candies. All soft candies, waxes, taffies, carmels, etc., are made of glucose. Children are, therefore, large consumers of this substance.
>
> The *honey bees are also fond of it*, and will carry it away by the ton if it is placed within their reach. The honey from it is no better than the PURE GLUCOSE, as it is stowed away in the cell without change.
>
> Human ingenuity, it is stated, has reached the point of making the honey and storing it in the comb without the intervention of the bee. By appropriate machinery a nice looking comb is made out of paraffine, and after the cells are filled with glucose syrup, this fictitious "honey" is warranted true white clover honey.

The *Standard* is honest enough to admit that the only use to which glucose is put is to *adulterate* syrup, sugar and the like, but condones the offense because forsooth the sugars are "used largely by the poor."

Any article which has no legitimate use is a *fraud*, and its manufacture should be stopped. All honest men should frown upon its very existence.

One point in the above article is worth more than a passing remark, viz.: that children are large consumers of it in the shape of candies, taffies, etc. Yes; and thousands go to premature graves, and this glucose consumption is largely the cause. Out of mistaken kindness, mothers will let their children eat candies because they want *sweets*, never once thinking that they are dealing out trash to poison their blood and send them to early graves.

That sulphuric acid, a strong poison, is used in the manufacture of glucose, cannot be denied; that it can be purified from its effects by proper care is true, but it is undeniable that in the usual glucose of commerce this acid is found in deadly quantities.

How much better it would be to feed "the little ones" with honey, make it into honey cakes, honey cookies, honey ginger-snaps, honey liquorice, or honey pop-corn balls, recipes for which are found in the little pamphlet, "Honey as Food and Medicine!" or give them honey on plain bread and butter, which will give them strength and health in a pleasant way.

The *Standard* asserts that the honey-bees are fond of glucose—yes; so fond are they of it, that they will not touch it except when deprived of the nectar of flowers—when it comes to that or nothing—and certain death to the bees is the result!

Then comes that *lie* of Prof. Wiley, about human ingenuity making honey out of glucose, and putting it into combs made of paraffine, without the aid of bees! This falsehood was written by Prof. Wiley as a "scientific pleasantry," he says, but it is a mischief-making *lie* all the same! And one that should gnaw at his conscience (if he has any) like a serpent, every time his eye meets it, in its everlasting rounds in the newspapers!

Oh, no! man's ingenuity stands aghast before the waxen cells of beautiful virgin comb, made by the bees to hold the delicious and God-given honey! Man's ingenuity has never dared to enter that contest, and probably never will—but Wiley's lie rides over the land like a fast-running engine, while his feeble excuse and explanation—that he meant it "only as a scientific pleasantry"—limps along behind as a cripple traveling at a snail's pace! It can never catch up with that *wily lie*, while the world lasts!

* * *

☞ We have received a pamphlet of 32 pages from the Michigan Agricultural College, by Prof. A. J. Cook, on "Injurious Insects." It is very interesting, and we presume it can be obtained by addressing the Professor, as it is evidently for free circulation—at least in Michigan.

* * *

☞ Mr. E. T. Flanagan and Miss Lillie R. Mithoff were married at Jefferson, La., on the 1st inst. We hope Mr. F. will realize much "honey" since the "introduction" of this new Southern "queen" into his "hive" at Belleville, Ill.

* * *

☞ In handling bees, do it quietly and easily. Avoid rapid, quick motions, but, at the same time, do not be all day at one hive, or so long as to induce robbing. Black or fuzzy clothes should not be worn in the apiary. White cotton, or linen, and a white straw hat is best. Veils have to be black to be seen through, but this should be all the black worn.—*Texas Ranch*.

* * *

☞ The "Autumn Leaves" which will bring the most returns are, no doubt, the Leaflets—"Why Eat Honey?" Scatter them and see the effect in selling honey in every neighborhood, at good prices. Two hundred will be sent postpaid for $1.00; 500 for $2.25; 1,000 for $4.00.

* * *

☞ Some severe frosts have been reported, but the weather is now very pleasant again.

The North American Convention.

The annual convention of the bee-keepers of North America is to be held at the City Hall in Rochester, N. Y., commencing at 1 p. m. on Tuesday, Oct. 28, and continuing three days. Reduced rates over the railroads are promised, and there will, no doubt, be a large attendance of those near the place of meeting, and many from other States.

As this is to be a National gathering, *wise* counsels should prevail, and whatever action is taken, should be based upon the interests of the bee-keepers of the whole American continent.

A youthful bee-paper, published in the East, contains the following hints concerning some "matters of VITAL importance" to be brought before that meeting:

"Be sure, if possible, to attend the convention at Rochester, N. Y., as matters of *vital importance to bee-keepers will be discussed*, and come prepared to do all in your power to advance the best interests of apiculture. Our conventions are the life of apiculture, and the interests of the bee-keepers are protected and advanced just in proportion as we take active interests in association work."

It then avers that it is desirable that "one journal shall be well-supported, which shall be the mouth-piece of the bee-keepers and work for their interests"—*i. e.*, making it the "official organ." Is this one of the "matters of vital importance" which is to be discussed at that meeting? If so, it is well to know it in advance, so that all may be prepared to *discuss* the subject and investigate it in all its *important* bearings.

If such were desirable, of course the oldest and most influential bee-paper should be made such "official organ," but we protest against any such action. There are 6 or 7 American bee-papers, and it would be unreasonable and unjust to endorse one to the exclusion of all the others—for all are interested in the success of our pursuit, and all should alike be recognized as co-workers under the National banner.

A local society might select a local organ, but the National Society should extend its influence through *all the bee-papers*, and engage all as co-laborers for the general good. To attempt to do otherwise would divide its interests and fritter away its power to be useful, and in the end it would be *suicidal* to the parent society, and work a positive damage to all. Of the National Society it should truthfully be said—

> "No pent-up Utica contracts our powers;
> The whole unbounded Continent is ours."

If *wise counsels* prevail at the coming meeting, the "National" may continue to be a power in the land—an energizing influence to aid the pursuit in its struggle for prosperity, and place honey-consumption upon the top-most round of popularity.

◆

Honey Exhibits at Mich. Fair.

Mr. H. D. Cutting, in the *Michigan Farmer* gives the following, which will be of interest to our readers, showing the growth of honey exhibits, and some of the benefits accruing therefrom:

Bee-keeping is one of Michigan's growing industries. It has to a great extent passed the experimental state, and has been recognized as a business possessing both pleasure and profit. It is but a few years ago since a few of the progressive bee-keepers began to make exhibits of bees and their products at the fairs. It was a small beginning, and the premiums were small.

A few years ago the attention of the State Agricultural Society was called to this growing industry, and the persistent efforts of a few to make a creditable exhibition, and they with their usual liberality, made a new department with a much larger premium list, giving the bee-keepers a building to themselves, with competent judges to make the awards. It was an experiment with the Society, but with Mr. W. J. Baxter as superintendent of the department, everything moved off finely, and the exhibition proved a success. And to encourage the bee-keepers to greater efforts, the Society increased the premium list to $300, the largest amount offered by any State Agricultural Society at that time. Mr. J. C. Shoemaker was made superintendent of the department, and he proved to be the right man in the right place, and it was the unanimous expression of all exhibitors, that Mr. Shoemaker was just the man for that department.

After detailing the exhibits, Mr. Cutting remarks:

Last but not least came M. H. Hunt, Belle Branch, Mich., and from the extent of his exhibit, he has been on a lively "hunt" all summer. He occupied the whole side of the building, 48 feet, with the largest and most interesting exhibit of this kind I ever saw. He and his friendly assistant, Mr. Chas. Collings, were kept busy from early morn till the building closed at night, answering questions, and explaining the different articles in his exhibit. The first to attract your attention on entering, was the large monument of solid wax, about 200 lbs., with the name Huber on the base. It was secured by Prof. A. J. Cook, for the government to send to New Orleans. Next was the great pyramid of extracted honey, in every conceivable shape, in glass, tin, earthenware and paper, all decorated with fancy labels, a large number of cases of comb honey, and a large collection of apiarian implements. Mr. Hunt received many premiums.

◆

Preparing to Winter Bees.

The *Tribune and Farmer* gives the following on the subject of feeding bees for winter stores:

Experience has proven that a changeable climate is the worst for bees, for when they remain in a semi-torpid state they consume less stores than when the atmosphere changes from warm to cold and *vice versa*. Then our aim must be to winter them in such a place where the thermometer will remain mostly near the freezing point. If this be in the open air, then winter your bees there; if in a cellar or bee-house, then in one of the two latter places. When you have decided upon the place, and have established your apiary for the winter, it is best that they should not often be disturbed.

In order to guard against this you must examine and make a record of the condition of each colony. If some have little honey and others a surplus, equalize the quantity that each may have a corresponding supply. Should there be no surplus, make a note of these that have a small quantity, and make an estimate how long that quantity will last, and after a certain period visit such colonies and feed them, if necessary.

Those that use honey for feeding bees generally dilute it with water, bringing it nearly to the boiling point, thereby uniting it better. A cheaper food is composed of sugar and water. Purchase the sugar, and to three parts of sugar, add one part of water and scald, and you have a good and digestible food easily made.

◆

☞ Mr. Blake, of the firm of Blake & Ripley, the Boston honey merchants, called on us a few days ago. He reports that honey is a staple in the Boston market, and obtains a fair and uniform price.

◆

Honey as Food and Medicine.

Single copy 5 cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

CORRESPONDENCE

For the American Bee Journal.

Controlling Increase.

JAMES HEDDON.

Before discussing the above subject I wish to make just a word of reply to Messrs. Tinker and Clarke in regard to their last attacks upon—well no, not my "pollen theory," but myself as a controversialist. I presume that many readers of the BEE JOURNAL are tired of controversy, for controversy's sake. Just here, where I cannot see that either of the attacks referred to bear the least weight toward answering the propositions of my theory, or substantiating any other theory satisfactorily accounting for our winter losses, is a good place for us to rest the discussion, to be finally settled by experiment.

To come to the question of prevention of increase, I wish to say that for years I have plead for a "readily-movable hive"—a light hive with a fast bottom; separate from the stand, but fast to the bottom board, or having the bottom securely nailed to the hive. With this movable-hive system I intended doing much work proposed by others to be done by moving the contents of the hive—the combs.

My system of preventing after-swarms by this movable-hive system, is described on page 126 of the BEE JOURNAL for 1883, and many other pages both before and after that date. I have also studied and written upon its application to the prevention of increase, *via* of prime swarms; but to-day we prefer the system of accepting the prime swarm as so much increase—except in cases where such increase is unsalable, and has already gone so far as to become a nuisance. Further on I will give you my theory and slight practice in regard to the best methods (as viewed by me) for this latitude, as Mr. Demaree has, in his article on page 619, invited friendly aid in working out the problem. His sharp sentence, in the last paragraph, tending to ward off all criticism from his article, is not kind, nor is his statement that the theory and system which he advocates as "new," correct.

This system of moving the old colony, or the new one about, to different angles, disguising the hive with a piece of cloth, then moving it to and fro by way of reducing the bees of one part, and strengthening the others by way of preventing increase, is by no means "new," but is just what I have been writing about for several years, and what several bee-keepers have been reporting as a successful practice, during the past season.

It seems to me that Mr. D.'s sharp criticism upon his anticipated critics, exactly applies to himself, as he simply gives some minor detail alterations of the old system, considering them "improvements." Let us "reason from what we know" about them, and see if our fellow bee-keeper has added one more ray of light to the apicultural torch.

All have known that colonies containing brood in all stages would work the same without any queen, but this condition of a colony is not what is meant by the term "queenless" in its strict sense; so says Father Langstroth. Mr. D.'s statement in his third paragraph is so peculiarly worded that it will bear much twisting to suit the developments of that future alluded to. I cannot think that the "near future" will so perfectly change and revolutionize our system of apiculture that the facts of to-day and mechanical appliances so well adapted to those facts, will all be laid aside and so soon forgotten. I believe that to-day we have many practical fixtures and methods which will live far beyond any person reading this sentence. Some 25 years ago, Father Langstroth said of his movable frames, that he did not claim perfection, for that rested alone with Him who made all things; but that so long as the honey-bee kept its present instincts, all frame-makers must either go over his road, or go around. He thought that he had found the best mechanical adaptations to positive known facts regarding the instincts of bees; and if he was not mistaken, such a statement was a true one. Well, 25 years of radical growth in the bee-business have left those words just as true to-day as when uttered a quarter of a century ago.

"Let it go to record" that I predict to-day, that our methods and appliances will undergo some changes and growth by way of keeping all which is best, and superseding that which is not best by that which is better; that the bee-keeping methods of the future will be like those of the past, a slow growth toward a higher standard of excellence. I believe that we now have some appliances which will never be forgotten; also some appliances and methods that will be forgotten. Among the latter, I think that I may count some of the methods or details cited in Mr. D.'s outline of manipulations for "preventing increase."

Mr. D.'s outline of operations is not only more work than the hiving of swarms, by those who have learned the short-cuts and supplied themselves with the proper implements for that work, but it violates some of our immortal laws relative to apiculture: 1. Bees work on comb honey in sections with the greatest vigor above combs of brood containing a queen. The more prolific that queen the better. 2. Nothing is worse to have below the supers than combs of sealed honey. 3. The bees will first fill these combs, and then if left, seal them up. If exchanged for more empty ones, as often as changed, so often the bees will refill them, and your comb-honey system is changed to the extracting system, and your comb-honey fixtures are just in your way.

The next noticable objection is the positioning of the queen. Let it not be lost sight of that the major portion of our permanent capital rests in the combs. The instinct of bees and their consequent acts, is fitted to this fact. The queen, during the month of May (in this latitude), finds her laying capacity greater than usual, and greater than the proper size of hive. She fills all available room, then leaves with a prime swarm which builds her more combs to lay in, and during the 15 days of queenlessness of the old colony, room is made by the hatching of bees for the use of the new queen, a room which the new queen soon occupies. It seems to me that Mr. D. has his queen in the wrong place. He most certainly does if he has an August and September surplus harvest, which he is very liable to have. In this point, I prefer the instinct of my bees to the philosophy of his theory, for my locality.

So far in my experience, I have never found it profitable to prevent increase while running for comb honey. I have further found it very unprofitable to prevent swarming by any method except such as caused the bees to forget it in their enthusiasm after surplus honey. But the prevention of swarming, and the prevention of increase are two different subjects. I have little doubt but that very soon we shall winter our bees with the same certainty that we winter our cows. If a practical solution of the pollen theory does not lead to this result, I feel sure that some other one will. The ball is now rolling fast; every close observer and inquisitive Yankee is on the alert, and we are sure to succeed, soon, under some leader. At our late Michigan State Fair, Prof. Cook said that indications, so far, favor the pollen theory. Dr. Mason, almost out of patience, said that the matter was no longer "theory" to him; for the practical tests of 4 or 5 winters had settled it with him.

I expect the time is near when most of us will find it best to keep down our increase, but not to prevent swarming by forced methods, such as dividing the bees that we do not wish divided, nor the necessity of clipping queen-cells. In its stead I would suggest a policy of this kind. Use shallow hives, at the same time giving plenty of surplus room, thus giving the queen more room in the brood-chamber by keeping the honey out of it. Shade and ventilate the hives well. Use bees containing some German blood. All this tends to prevent any desire to swarm on the part of the bees; but it is no sure remedy. In some locations, and some seasons, colonies seem unaccountably seized with a craze for swarming, and no known methods of operation will stop this desire, and no bee-master can account for the impulse.

Now, as to my theory in regard to the prevention of increase of colonies, I will here say, as I have before written, that my readily-movable hive system can also be used to prevent increase by prime swarming, as well as after-swarming; and this is how I should expect to accomplish it, at the same time co-inciding with the most profitable instincts of the bees.

As stated above, try to reduce the number of colonies that will try to swarm, to the lowest minimum. When one does swarm, hive the prime swarm on frames filled with foundation or full combs, and place it on the old stand, transferring all the surplus cases to the new colony. Put the old colony on the north side (supposing the hives of the apiary front east) at right angles with the new colony on the old stand. (Of course it is understood that the hives are exactly alike in construction and color.) Now, to prevent after-swarming and to accept the increase of the prime swarm, we wait about 48 hours, and then turn the entrance parallel with the old colony, and about 6 or 7 days later, when the most of the bees are in the field, we remove the old hive to a new location; all of which process is described on page 126 of the BEE JOURNAL for 1883.

But now to prevent increase by way of this prime swarm, instead of taking away the old colony, just place it directly behind the new one on the old stand, with the front end of the hive about 6 inches from the rear end of the hive containing the new colony, and cover it with a cloth (we use burlap), as directed in a previous article. The cloth must cover the front of the hive, but not so completely as to prevent the circuitous exit of its bees, which will constantly leave it and return to the old stand, and join with the prime swarm thereon. In a few days more this feeble colony will have a fertile queen, and these removals have made it so weak that no second-swarming will take place. No clipping of queen-cells is needed, nor even the opening of either hive, as yet. The young queen will be one of natural selection by the law of the survival of the fittest. There will be no trouble arising from overlooking a cell, that was so retiring in the comb as scarcely to be perceptible.

Now, when this young queen begins to lay (which can be readily determined by looking for eggs), you can very easily find her in so weak a colony. Open both hives, and in both you will not find more than 8 combs of brood. Put these 8 in the new hive on the old stand, under the surplus honey, and the other 8 combs of honey into your honey house. Do what ever you choose with this extra queen. If I had no sale for queens, I should prefer to supersede the old queen with the new one, thus being reared under most natural conditions. An apiary worked on this partially non-swarming plan, will contain many queens that need superseding, and you can do it by using this newly-hatched and fertilized queen.

Regarding the 8 combs of honey, you can extract them, throwing out a first-class consistency of honey; or you can select 5 of the heaviest with honey and most free from pollen, and use them to winter the colony with; by trading these 5 for their most pollenized 5 combs, just as soon as brooding is finished in the fall. I know that this method, like Mr. D.'s, has the disadvantage of having to keep on hand a supply of extra hives and combs, and forces one to run for extracted honey in part, whether he wishes to be a comb-honey specialist or not.

I have written this not because I think that it surely is the best way to keep down the increase of an apiary, from year to year, but as illustrative of the different detail of management that Mr. D. and myself would apply to the movable-hive system that I have been advocating for a few years past. It will not be at all of a surprise to me if the experience of the future will prove that the most profitable way will be to accept of all prime swarms that offer, preventing after-swarms by the method depicted on page 126 of the BEE JOURNAL for 1883, and unite the colonies with the original numbers, either in the fall or in the spring following. Certainly the latter plan will be the best for all who still lose a portion of their colonies during the winter.

Regarding the matter of swarming tending to lessen the yield of surplus comb honey, let it be remembered that the largest yields on record, have come from the colonies which cast not only one, but two and three swarms. Some of our leading bee-keepers have declared it unjust to put these yields against the yield from a colony that did not swarm. Of course different locations and climates require a different treatment; but how any location can find any economy in keeping the queen with the full combs instead of the empty ones, and storing surplus comb honey above solid combs of honey, I shall have to have further light in order to understand the mysteries of such location.

Dowagiac, Mich.

For the American Bee Journal.

Haldimand, Ontario, Convention.

The Haldimand Bee-Keepers' Association met at Nelles' Corners, on Friday, Sept. 26, 1884. The minutes of the last meeting were read and adopted.

The first question taken up was the best method of marketing honey. The President thought that it was a bad plan to rush to market with honey as soon as it was extracted; by doing so the price was lowered.

After considerable discussion on the above subject, it was decided that Messrs. Armstrong, Williamson and Campbell be a Committee of this Association to ascertain the best market for sale of honey, and that the members furnish the Committee with the amount and quality ot the honey that they have for sale.

"Best method of preparing bees for winter." The President described a clamp which he had built for packing his bees in for winter. Mr. Atkinson said that each colony should be kept breeding late, and well supplied with plenty of stores. Mr. Kitchen advocated plenty of ventilation at the bottom, a littte at the top, and the purest honey left for the bees to winter on.

Mr. Vanderburgh stated that he used a double-walled hive, with chaff on top of the frames, and had not lost a colony in three years. In answer to a question from Mr. Armstrong, he stated that he put a clean cloth over the frames instead of the one used in summer.

Mr. Armstrong winters his bees in different ways; some of them in double-walled hives packed in chaff on the summer stands; others in a clamp, packed in sawdust with strips over the frames, and 16 or 20 inches of sawdust on top. Each colony should have a good, vigorous queen, kept laying as late as possible, so as to go into winter quarters with plenty of young bees.

Mr. Kindree packs his bees the same as Mr. Vanderburgh, and uses his judgment as to the amount of packing that each colony requires, giving a light one more packing than a strong one.

Twenty-two members reported 265 colonies in the spring, 520 fall count, and 13,162 lbs. as their total crop of honey for the season of 1884.

E. C. CAMPBELL, *Sec.*
E. DECEW, *Pres.*

For the American Bee Journal.

Michigan Bee and Honey Show.

W. Z. HUTCHINSON.

Once more has Michigan out-done herself in the exhibition of bees, honey, and apiarian implements at her State Fair. A building 28x48 feet was literally filled to overflowing, part of the exhibit being shown outside in a neat little shed. Prof. Cook pronounced the exhibition the largest and best that he had ever seen in the United States. There were 150 entries made, and the value of the exhibits amounted to $2,780.80.

Mr. H. D. Cutting exhibited 81 volumes of apicultural literature, his improved hive, a Langstroth hive, the walls of which were made of straw, samples of 15 different varieties of honey, besides a collection of implements such as feeders, smokers, queen-cages, etc.

Dr. Besse, of Ohio, made quite a large display of extracted honey put up in two-pound glass bottles, samples of 13 varieties of honey, a one-frame nucleus of Italian bees, a Root foundation mill, a collection of queens, and also a few implements.

Mr. E. E. Mason, son of Dr. A. B. Mason, of Wagon Works, O., had on exhibition a Vandervort foundation mill and a Given press.

W. Z. Hutchinson's exhibit was much the same as that of last year, except that it was larger. His pyramid of comb honey contained 3,500 pounds, but he made no display of extracted honey. His display of honey-producing plants, pressed and mounted, numbering 77 specimens, were fastened to the wall and upon the roof back of his exhibit, and formed an appropriate back-ground. His collection of bee-literature, 79 volumes, contained full sets of both the AMERICAN BEE JOURNAL and *Gleanings*.

His collection of implements numbered 80; and his display of full colonies of different varieties of bees was the largest shown, there being Italians, Carniolans, Syrians, hybrids and blacks; also a one-frame nucleus of Italians and a queen.

Elmer Hutchinson (W. Z.'s brother) showed 73 varieties of honey-producing plants pressed and mounted. Perhaps I should not say that he showed them, as they were not put up, simply because there was no room. He had on exhibition full colonies of blacks, Italians, Syrians, and Cyprians, two crates of comb honey, and a collection of queen bees.

R. L. Taylor, of Lapeer, Mich., occupied one entire end of the hall with a display of comb honey. Beginning about 2 feet above the floor, the crates of honey were piled up in one solid pyramidal pile, the top of which lacked only about 2 feet of reaching the peak of the roof. With light red for a back-ground, this pyramid of more than 4,000 pounds of comb honey, made a bright, handsome, and striking display. Mr. Taylor also exhibited a colony of Italian bees, a bee-hive, a machine for piercing holes in frames for wiring, and a Given press.

Mr. M. H. Hunt occupied one entire side of the building. His display of extracted honey, foundation, wax, and implements was the finest in the building. The extracted honey was put up in tin cans, tin pails, glass pails, glass jars, glass bottles, jugs, etc., all of which were tastefully arranged. The foundation hung in long strips and festoons from the "plate" of the building, the bright, yellow wax forming a pleasing contrast with the dark-blue back-ground. One strip of foundation was 50 feet long. Mr. Hunt seems to have learned the art of sheeting wax, so that it will be tough even in cool weather. Perhaps the finest thing in his whole exhibit was a wax monument nearly 4 feet high, and weighing nearly 200 pounds. The base was 17½ inches square, and upon one side, in raised letters, was the word HUBER. The other sides of the base, as well as the sides of the second block, and the sides of the upright shaft were appropriately paneled. Taken all in all, it was a fine piece of work. Mr. Hunt also exhibited full colonies of Italians, Syrians and blacks, and a Syrian queen in a one-frame nucleus of black bees.

Mr. C. M. Weed made a display of over 50 specimens of honey-producing plants pressed and mounted.

Through the centre of the building was a long table 4 feet wide, covered with a miscellaneous collection of exhibits. One of these exhibits was a pyramid of square bottles of different sizes filled with honey having a very slight, amber tinge. There was a door at each corner of the building, and many pleasant minutes were passed in watching the sunlight stream in at these doors and shine upon this pyramid of amber-colored honey. What beautiful tints were brought out! This exhibit belonged to Mr. O. H. Townsend, as did a bee-hive, a one-frame nucleus, and a case of comb honey.

A Mr. Quick showed cans of extracted honey, cases of comb honey, a bee-hive, and made a very fine display of Van Deusen foundation.

Mr. G. K. Hubbard, of Indiana, exhibited his patent hive, two one-frame nuclei, and some fancy specimens of comb honey.

Premiums awarded amounted to nearly $300.

A few years ago, when attending the Michigan State Fair, the writer made a diligent search for some display in the apiarian line, and at last found, sandwiched in between the dairy products, a few brood-combs of honey hung upon a rack. "Look on this picture and then on that." Michigan bee and honey shows are now "up with the times."

Rogersville, Mich.

The Maine State Fair.

The Maine State Fair closed on Saturday, Sept. 29, 1884.

The number of individual entries in the bee-department of the Maine State Fair were not large, but comprised many implements and fixtures, several colonies of bees under glass, and a capital exhibit of honey, both in quality and quantity.

Mr. E. P. Churchill, of North Auburn, exhibited one full colony of Italians, one nucleus-colony of Italians in observatory hives, showing all the movements of the bees as they cluster about their queen. Many were the inquiries elicited by this exhibit of real, live bees, in which the various processes of comb-building could be explained. Two section-cases were included in this collection of fixtures. Another useful implement exhibited was an entrance-spring press for moulding entrance clasps, a combined bee-pass and feeder in the sections, box-nailer, holder for nailing frames, mould for forming division-boards, uncapping knife, foundation-fastener, chaff and single division-boards, and pattern for making hives. In this exhibit were shown two samples of nice, extracted honey.

J. B. Mason, of Mechanic Falls, had a fine and large exhibit, including one full colony of pure Italian bees, and observatory hive in which the bees and combs are shown under glass.

Two geared honey-extractors were shown, also Churchill's improved chaff-hive, and a Simplicity-Langstroth hive.

Among the numerous fixtures in Mr. Mason's exhibit, were included foundation-fastener, samples of comb foundation (heavy and light), dove-tailed sections, wire for frames, large collections of bee-literature (comprising seventeen bee-papers and eighteen books), frame with foundation, setter for some three styles of bee-feeders, machine for putting sections together, Blake's and Clarke's bee-smokers, Jones' drone-guard, perforated zinc honey-board, metal rabbets and corners, nucleus hive and frames, chaff division-board, separators for sections, a reversible frame, queen cages, comb basket, and atmospheric feeder. In this exhibit were a dozen, or more, beautiful Italian queens confined in separate cages, with a few of the worker bees in each. Preserved in alcohol, Mr. M. had specimens of the queen in embryo, embracing each change from the eggs to maturity.

The honey exhibit included extracted honey in glass jars, and three glass monuments of exceeding beauty and richness, also one case of sections filled with nice clover honey.

I. F. Blaisdell, of Fort Fairfield, made a very nice display of comb honey. His exhibit was in three-pound glass boxes, and comprised 425 pounds.

Another fine sample of comb honey was that of Edward Tarr, of Castle Hill. He is also a large honey-producer, his crop being, this season, a ton and a half.

Mr. G. W. P. Jerrard, of Caribou, made his usual fine display of comb honey and bees. The bees were blacks and Italians in observatory hives. Mr. Jerrard keeps his bees on the most improved plans, using fixtures and inventions of his own of peculiar merit for display of comb honey and for transporting the same, long distances. Mr. Jerrard has produced about 8,000 pounds of finished honey, that is, in neatly-capped sections, besides 2,000 pounds in partly-filled boxes.

Mr. Blaisdell, of Fort Fairfield, said, "On two square miles where I live, some 500 colonies of bees are kept, producing many tons of pure honey." Aroostook county is truly "a land flowing with milk and honey."—*Lewiston, Me., Journal.*

For the American Bee Journal.

Moisture in Bee-Cellars.

C. W. DAYTON. ♂

In the fall of 1883, I selected 8 colonies of bees, to each of which I gave 6 combs, the lower half of each comb being well occupied by pollen, and most of the cells above, which contained honey, were about half full of pollen. The brood-chamber of each colony was covered with enameled cloth.

Three of the colonies wintered well. Three having less honey and more pollen than I expected, starved about 10 days before the time to put them out of the cellar. None of the starved colonies contained a half dozen bees having distended bodies.

In another colony that clustered low on the combs after being in the cellar about 70 days, moisture commenced accumulating in drops around a circle directly over the cluster on the under side of the enameled cloth. This circle continued to grow smaller, and the drops of moisture continued to grow larger until the enameled cloth was entirely covered with drops of water, which ran down on the combs or dropped into the cluster. Previous to this the bees had appeared almost lifeless when looking in at the top of the hive with a light; but now they acted as when swarming, and clustering without a queen, and there was a smell of diarrhœa without evacuation.

On entering the cellar, one morning, the cluster was found broken and the bees performing in a way peculiar to bees badly afflicted with diarrhœa. I doubled back the enameled cloth one half and left them until evening, when I found them quietly clustered at the tops of the combs. After drying and replacing the enameled cloth, they remained as quiet as they had been during the 70 days, when they were taken to the stand and found without brood, and (with the exception of a few slightly-distended bees) in prime order.

The other, having the enameled cloth perforated in the centre and covered with course straw, remained quiet 85 days, when my attention was drawn by the appearance of a distended bee. More days brought more distended bees, increasing symptoms of diarrhœa, and a quick, spiteful roar about once a minute. On examination I found the straw near the perforations, in the enameled cloth, dripping wet, and that the roars corresponded to the drops of water that passed through the perforations into the cluster. After the straw was removed, the moisture passed off, and the bees gradually returned to their former quietness, and so remained to the end of the winter.

In answer to a question on page 37: After wintering bees in a cellar that resembled the one described on page 6, in the place built, number of colonies put in, material used in construction, ventilation, size, moldy combs with the bottom-boards left on the hives, arrangement of hives, and the dropping of water from the walls and joists, I believe it to be another instance of the condensation of moisture, the same as that on the pitcher of water on the summer dinner-table, as the moisture on the joists varied with the outside temperature; and if I should open the door letting warmer air into the cellar, condensed moisture would soon drip from the walls, and shutting the door caused the moisture to disappear.

To all appearances my cellar is very damp, yet last winter when the bees were in it, salt would lose moisture while moisture condensed as before described, and ran down, swelling the wood on the inside of the hives, which caused them to split open. The draft in the ventilator was able at times to carry pieces of paste-board, and again it moved in an opposite direction.

In the early part of the season I sometimes feed diluted honey to my whole apiary, in the open air, from a pan about 4 feet square, the bottom of which is filled with slats set up edge-wise ⅜ of an inch apart. I have often fed 75 pounds in a couple of hours, with perfect satisfaction, excepting that I believed from the searching by bees and flies on the grass, in a line from the feed to the apiary, and the fact that the quality of the feed varied the size and number of drops, that the bees wasted a share of the feed in the spray described by Mr. S. J. Youngman on page 556: "I have seen this water-like spray, day after day, for 50 or more days, and at the same time in each day I saw pollen-colored excrement (that was too thick to be called a liquid) well strewn on everything over which the bees flew, and it was always of about the same consistency, and conformed in quantity to the amount of brood-rearing going on.

Bradford, Iowa.

For the American Bee Journal.

Northeastern Kentucky Convention.

The Northeastern Kentucky Bee-Keepers' Association met in Walker's Hall, at Covington, Ky., on Sept. 25, 1884. The attendance was good. The minutes of the previous meeting were read and approved, after which regular business was transacted. The committee appointed at the last meeting to attend the State Association, which met at Eminence, Ky., on Sept. 2 and 3, reported as follows: "Owing to some misunderstanding, the attendance was very small; the meeting was, nevertheless, very interesting. The Rev. L. Johnson, of Walton, Boone county, was elected President, and John T. Connley, of Walnut Lick, Gallatin county, Secretary for the ensuing year." The above named gentlemen are both members of the Northeastern Kentucky Association, and the remaining members heartily endorse their election.

To return to our own meeting: Several members who were absent at the last meeting gave in their reports, which were about the same as those previously given. A great many subjects were discussed, the winter problem receiving the most attention, although a threadbare question to many. Still its solution is occupying the talent of the fraternity. The general opinion seemed to be that a plentiful supply of pure, ripe honey, with a moderate consideration of other necessaries, would insure success.

Mr. Wm. Blick, of Covington, reported that he had but 3 colonies of bees, all of which were badly infected with foul brood. How it came, or where it came from, he knows not. Mr. Chas. F. Muth, of Cincinnati, O., stated that he had seen Mr. Blick's bees, and advised him to suffocate them with sulphur and then cremate their hives and all connected with them. Mr. Blick promised to do so immediately after the meeting of the Association, as he wished the members, who had never seen a case of foul brood, to see this. On motion, Messrs. Blick and Cree were appointed a committee to visit apiaries in this vicinity in quest of foul brood.

Rev. L. Johnson offered the follow-resolution:

Whereas, Foul brood in its malignant form has appeared in Covington, Ky., we, therefore, request all persons who discover bees so affected, to immediately burn all hives and fixtures so affected.

The resolution was unanimously adopted.

It was reported by some members present that there is a party in Newport, Ky., adulterating honey and then selling it as pure. All agreed that this is injurious and detrimental to the bee-keeper's interest. The Rev. L. Johnson again came forward with a resolution:

Whereas, It is reported that a certain party is selling adulterated honey in Newport and elsewhere,

Resolved, That we request the Secretary of this society to ascertain the name of such party, and properly inform the public against him.

Rev. L. Johnson advanced some very wholesome suggestions in regard to the meeting of the State Association here (Covington) on Sept. 23 and 24, 1885. He proposes to give a portion of his time, this coming winter and spring, to lectures on "Bees and their Management;" to which Mr. Chas. F. Muth offered the following: In consideration of the proposition of Rev. Johnson, President elect of the State Association, that he contemplates to give a series of lectures on bee-keeping, during the coming winter and sping, for the benefit of bee-keepers, be it

Resolved, That Bro. Johnson is requested to take a collection at every meeting to defray his own personal expenses, and put the surplus, if any, to the "Langstroth Fund." We are aware of the gratitude which every one of us feels towards Mr. Langstroth, and knowing that he is in needy circumstances, the assistance of sympathizing associations is invited.

Our own meetings are growing in interest, and the bee-keeper, be he a novice or an expert, can always learn something new. We certainly consider it a treat to listen to such men as Muth, Johnson, Stith, Connley, McVean and others discourse on the science of apiculture.

On motion it was decided to hold the next meeting at Walton, Boone County, Ky., on the first Wednesday in April, 1885. G. W. CREE, *Sec.*

PETER MCVEAN, *Pres.*

For the American Bee Journal.

Poisonous Honey—Fertile Workers.

C. M. HIGGINS.

On page 613, Mr. A. Osborn strives to be ingenious in finding the cause of poisonous honey, but his argument is "too thin." If all honey were alike in quality, color, etc., then a clear reason might be found to fit; but all honey is not alike. Who ever heard of well-ripened honey producing serious effects? Uncapped honey from the yellow jessamine in Florida is actually poisonous, and has produced death; but after it is once capped, there is no honey nicer or more wholesome. Besides in good extracting weather—when the weather is clear and warm, and honey is being gathered rapidly, bees pay very little attention to disturbance, and can often be handled without smoke or a veil, and do not show those little poison drops on their stings that they do when the weather is unfavorable for manipulation. This seems to be another one of the "views" of bee-keepers.

I had several colonies, during the present summer, which contained fertile workers. How to get rid of them and save breaking up the colonies, puzzled me for a long time. Finally I thought that I would try what was to me an experiment; for all the information that I had ever gotten before, advised breaking up the colony. I found that by the time I was enabled to tell the presence of a fertile worker, the bees had become old enough to be called old bees. Of course they would not receive a queen, neither would they rear a queen-cell, and I could not find the fertile worker. I concluded to try putting one frame of eggs and young larvæ into the hive, and changing positions with a strong colony. The bees that entered the hive now had no use for a fertile worker, and killed her; and then having the means, I found them building queen-cells in a couple of days afterwards. Since then I have had no trouble with fertile workers.

In one case I changed a colony into a fertile-worker colony to see the result. A few minutes afterward I opened the hive and found the queen balled, but unhurt, by one set of bees, and the fertile worker was balled and killed by the other set of bees. I then caged the queen for 24 hours, when I set her at liberty, and she began laying unmolested.

Stoneville, Miss.

Colorado State Convention.

A meeting of the Colorado State Bee-Keepers' Association was held on Sept. 14, 1884, at the Court House, in Denver.

As was anticipated, but few members were present, and in the absence of President Godfrey, Vice-President Milleson presided. Mr. Robert James was chosen Secretary, J. L. Peabody being absent.

It was learned that most of the records, as well as all copies extant of the constitution and by-laws, had been irrecoverably lost, which rendered necessary the adoption ot a new series as nearly similar as possible to the former, and on motion of Mr. J. M. Clark, a committee to consider the subject was appointed by the chairman, who named as such committee, Mr. Clark and Robert James, and directed them to report at the next meeting.

After some discussion regarding the affairs of the Association and the passing of a resolution of thanks to the County Commissioners for the use of their room, it was voted to adjourn.—*Colorado Farmer.*

☞ The name of the Monroe City, Mo., Bee-Keepers' Association was changed on Oct. 1, 1884, to the Northeastern Missouri Bee-Keepers' Association. The next meeting will be held on Oct. 21, 1884, at Hunnewell, Mo. A. NOLAND, *Sec.*

For the American Bee Journal.

The Hibernation Theory.

W. F. CLARKE.

I have every reason to feel pleased and satisfied with most of the references which have been made by correspondents of the BEE JOURNAL, to my theory concerning the hibernation of bees. They have been kind, appreciative, respectful, and very much to the point. Mr. Heddon's critique on the subject was especially good. Its tone was admirable. In fact, I thought the whole article quite a model of controversial writing. The suggestion of a possible co-partnership between the pollen and hibernation theories interested me not a little; as it showed great magnanimity in Mr. Heddon to be willing, should facts require it, to share the honors of discovery with one not actually devoted to bee-keeping as a business. I am not a little proud of the admission so frankly made by him, that I have contributed one of the points in that triangular discussion which has done much to solve the hard problem of our winter losses. The complete solution of that problem which now seems to loom up in the near future, will be the jubilee of bee-keeping in which we shall all rejoice together.

It would trench too much upon the valuable space of the BEE JOURNAL, which has already been largely taxed in relation to the subject, for me to reply to each and all of my brother bee-keepers who have been kind enough to take the matter up. Besides, "the game is young," many of our most experienced bee-keepers have not yet taken a hand in it, and the experiments of the coming winter will doubtless throw much light on it. I only desire, at this time, to say a few things by way of keeping the ball rolling.

Mr. Heddon is right in wishing a clear definition of the word "hibernation." He has given the Dictionary explanation of it. I gave the scientific use of the term, as it is employed in works on natural history. There are these two significations of it. Let us agree in this discussion to use the word in its scientific meaning, which imports the state of torpor or semi-topor into which various animals and insects are wont to go during the season of winter in a cold climate. Let it also be understood that hibernation may be complete or partial. The bear is an example of complete hibernation. Mr. Heddon says, "If they hibernate, no food will be consumed." It would be more correct to say *while* they hibernate no food will be consumed. But I have already stated very distinctly that bees hibernate like squirrels, at intervals, and do not take one long winter sleep. Hibernation too, has its degrees. In some cases there is, as Mr. Heddon says, "total inactivity or suspension of the functions of life." I do not claim this in regard to bees. I have only contended for what Mr. Heddon admits, viz: "a quiescent state." Nor do I desire a better example of the hibernation of bees than he himself gives in the case of that particular colony, which consumed only a single pound of honey during the winter; or of those colonies which varied all the way from 2½ to 5 or 6 pounds in their winter consumption of honey. I put it to him and to the bee-keeping fraternity in general, if it will not be a grand discovery to find out how to winter colonies of bees well with so small a consumption of honey? He testifies that it has been done at least once by himself. If we can ascertain the conditions on which we can all do this each and every winter, what an immense gain it will be to the bee-keeping interest, in the preservation of colonies, and also in economy of winter stores. I do not pretend to have done more than to have evolved the principle that the state of hibernation, or, if you please, "quiescence" is the normal condition into which we should seek to bring our bees in a cold climate like ours, and that if we do this, they will winter in the best possible manner.

Here let me say that my position is not thoroughly understood by some who have written on the subject. Thus, Mr. Gresh says, on page 599, "I do not believe that hibernation is indispensable to the safe wintering of bees." Nor do I. Mr. G. states my position more correctly when he remarks a little further on, "I believe, though, that hibernation is the natural state in which bees can successfully pass through considerable severity of cold." No doubt bees can be wintered "safely" in a high temperature, but it is difficult to do it in our climate, and involves a prodigal consumption of honey.

My fellow-Canadian, Mr. Pringle, says, "If Mr. Clarke means that bees will not winter well on the ground, he is certainly mistaken." I do not mean that. Under certain circumstances bees have wintered well on the ground and under the ground, but for all that, I think it a mistake to put them where they are exposed to dampness, to foul air, and liability to suffocate from accumulations of snow and ice. Mr. Pringle thinks that there is, after all, "some truth" in my "new-fangled notion." I am surprised, therefore, that he should poke fun at the "nocturnal travail" with which it was brought forth. I suspect that he is a sound sleeper, and I envy him, if it be so. He, too, gives an example of what I mean by hibernation. Certain of his bees were in a "profound slumber," gave no response to "several pretty hard knocks on the hive," and showed a lethargic indisposition to move. Mr Heddon says that he never knew bees to get into such a state of torpor as not to respond to "the least tap or jar." Many bee-keepers, however, like Mr. Pringle, disagree with him—notably Mr. L. C. Root, who, in his new edition of "Quinby's Mysteries of Bee-Keeping," mentions a case of wintering which is very similar to that narrated by Mr. Pringle.

Mr. Latham's article on page 550, is pretty sound, and quite interesting as furnishing proof that bees incline to go into "a semi-dormant repose" as he calls it, and winter well when they do so; but if these are facts, is it not important that they should be recognized as such by bee-keepers generally, and acted on in their winter arrangements? If these are facts, they demonstrate the theory of hibernation to be correct. It is quite true that "there is no new thing under the sun" but the practical use of many things old as the everlasting hills has wrought great revolutions in modern times. Steam and electricity are not new things; they are old as the aged earth itself, but their modern applications are new. When an old principle is brought to light, public attention directed to it, and practical applications made of it, the fable of the mountain in labor is hardly applicable to it. If hibernation is the key to successful wintering, as I firmly believe it is, the recognition of this principle, in its practical applications, may surely, without any impropriety, be characterized as a *valuable discovery*. Such, I trust and hope it will yet prove to be in the future history of apiculture.

Speedside, Ont.

For the American Bee Journal.

Bee & Honey Show at Louisville, Ky.

G. W. DEMAREE.

Owing to bad management on the part of the managers of the Exposition, our bee and honey show was not what it should have been. The Exposition Company appointed a committee to arrange matters for the "display." The committee set the time for Sept. 4 to 6, and just one week before the time set by the committee, the managers of the Exposition changed the time just six days in advance. This short interval gave no time for public notice except through the daily papers, and these do not reach many bee-keepers at all. The consequence was that the display was rather slim, and to add to the discomfort, the weather turned intensely hot.

The display of bees and queens was much better than that of last year, but the honey show was light. On Wednesday, Sept. 10, in the afternoon, the heat in the Exposition building was well nigh intolerable. At one time I believed that all the bees in the building would perish. One large colony in a Langstroth hive, with glass sides, with a case of one-pound sections on top of it, though pretty well ventilated with wire-cloth, began to sweat profusely, and I could smell the unpleasant odor incident to such a condition, several feet from the hive. Being a member of the committee on the display, I procured some ice, and all the bees were saved by its application to the glass sides of the hives.

Your correspondent captured the prize for the finest Italian queen and bees; while an old gentleman from the city of Louisville, Mr. J. McDowell, took the prize on the best display of bees. Mr. Lewis Hofstatter, of the same city, carried away the prizes on honey. I feel sure that Mr. Hofstatter would have been compelled to share the prizes with me had it not been for the neglect of the Adam's Express Company, which failed to deliver a consignment of honey to me at the Exposition building. Mr. Hofstatter also took the prize on the best display of honey-plants. He was left without competition in this line on account of the neglect of the before-mentioned express company, as they failed to deliver a box of prepared honey-plants of over 50 varieties, which I designed to have on exhibition. Mr. Hofstatter was aware of these expected exhibits, and humorously remarked that it was an "ill wind that blowed no one any good."

Among the implements exhibited was a solar wax extractor of the devising of Mr. Hofstatter. This class of wax extractors ought to be better known among bee-keepers, for I feel sure that by their general use a better article of beeswax will be the result. A peculiar feature about this particular solar wax extractor, worthy of note, was a double "lid" or cover which was hinged together, the one of glass being underneath the wood cover. By the way, the wax exhibited by the owner of this apparatus, was peculiarly fine both in color and quality. He had the figure of an eagle with outstretched wings perched on top of his pyramid of honey, which was ingeniously wrought of the finest quality of yellow wax.

Perhaps the wax on exhibition looked peculiarly nice to me after trying, the past season, to use foundation made in Ohio, which was so full of dirt that one could imagine that he could hear the dirt "grit in the teeth" of the bees when drawing out the cells.

A real novelty in the form of an automatic honey extractor and surplus case combined, was to be seen among the implements of the apiary. This curiosity was the emanation of the grasping, fertile mind of Mr. Lewis Hofstatter, of the city of Louisville. It was a cylinder-shaped drum adjusted on a honey-board, inside of which is a revolving cylinder with a continuous honey-comb around it. There is no septum to the comb, the cells being all over the outside. To illustrate: If you should wind a sheet of foundation around a cylinder, making it fast to the cylinder with melted wax, and adjust it in a metal drum of the proper size to give proper bee-space, the bees would draw out the cells to the full length, and you would have Mr. Hofstatter's revolving super. One set of "geared" wheels will fit all of them, and the honey is "slung" out without moving the super from its place on the hive. Of course the extracting is done before the cells are sealed, and the bees are driven down with smoke before the comb cylinder is set in motion. The honey runs out of a spout at one side of the super. As impractical as this whole scheme looks, the inventor had a jar of pure extracted honey taken in this way, and by this curious device. Of course the whole thing is impracticable, but is mentioned here to illustrate the wonderful grasp for things new in the bee-keeping world.

On Wednesday afternoon, after cooling down the bees with ice, we repaired to the "park" adjacent to the building, to imbibe the pure air and to "talk bees." Mr. Hofstatter, who is of German extraction, and thoroughly posted on every topic pertaining to the science and practical working of the apiary, led off in the conversation. We had no faith in the pollen chimera. Bees in the South winter perfectly, no matter how much pollen is in the hive, provided that there are plenty of stores present in shape of honey or sugar syrup. The fact alone ought to convince any intelligent person that dysentery or bee-diarrhœa is the result of climatic causes. I would not hesitate to offer a reasonable prize for well authenticated proof that a colony of bees in normal condition, when put into winter quarters, ever perished with the disease known in the North as bee-diarrhœa, in all central and southern Kentucky.

Aprôpos of the hibernation theory, Mr. Hofstatter says that he has seen unmistakable proof that bees do sometimes—even in this climate—sink into a quiescent state resembling the state known as "hibernation." On one occasion, when looking through his bees in the latter part of the winter, he found one colony motionless, and passed it as dead; but it afterwards turned up all right.

I do not object to this, but it is the exception and not the rule. In the winter of 1880-81 my bees were not confined longer than a week at a time, and in January they were able to stir out on every day but three, and I never had bees to winter better. Mr. H. believes that a contracted entrance to the hive is dangerous to the safety of young queens when returning from the wedding tour. He says that every colony contains more or less old bees that are unfriendly to the aspirations of young royalty. He says, "Give them a wide entrance that they may "slip around" these hostile, jealous "old crab" and take refuge among the young bees, and there will be less loss in this line. I felt much interested in the suggestion, as my loss on this account has been very heavy during the past season. Mr. H. is an advanced thinker. He believes that "royal jelly" is largely composed of "animal substance," viz: masticated larvæ. He suggests the idea that the fertile worker is a worker bee, made such by the process of "balling."

Mr. G. W. Ashby is an enthusiast in the bee-business, but in a practical way. He owns a farm of over 700 acres, situated on the Ohio river below the city of Louisville. His farm is largely stocked with mules and short-horn cattle, and yet he keeps a large apiary, and stays in it much of the time. His wagon goes to the city every Saturday, loaded with honey, fruit, melons and vegetables. It occurs to me that a man situated as Mr. Ashby is, with his farm of 700 acres stocked with droves of mules and cattle, and with his large apiary of “pure” Italian bees, would be a “foe worthy of Mr. Heddon's steel” in a battle for “priority of location.” Many of our best practical apiarists are never heard of through the bee-papers.

Mr. Hamilton, a German of the city of Louisville, and his wife, who is a “helpmeet” indeed, are silently working their apiary for the money that is to be gotten out of the business. This gentleman has made his apiary pay good profits under unfavorable circumstances, being located within the city limits, where there is but little white clover. They have determined to look up and move to a good country location, and there prosecute the business of honey-producing.

I have ascertained the fact that we have quite a number of such apiarists as Mr. Hamilton and his wife, in our State. To these people bees are not “pets.” They are managed and handled with care, just as the judicious farmer handles his stock. The owners of the bees take a deep interest in them, because they are a source of livelihood. They are troubled by no false sentimentalities. The question with them is, “How shall we make our bees pay best?”

Christiansburg, Ky.

For the American Bee Journal.

Queen Rack and Nursery.

FRED C. SMITH.

I send one of my queen-racks or queen-nurseries, and would like very much to have you give it a place in your Museum, and this description of it in the BEE JOURNAL. It is made to fit the honey-crate, one that is used for comb honey. My crates are made so as to hold 24 one-pound sections, or 6 of them in each department. Then I have 4 of my nurseries for each honey-crate, holding 7 queen-cells each, or 28 in all. These racks I place on the slats of the crate, just as I would the sections for comb honey.

The sides of this nursery are 11½x1 inch, and ⅜ of an inch thick, the end pieces are 3½x1 inch, and ⅜ of an inch thick. These pieces are to have a rabbet cut 1-16 of an inch deep on the upper edge, so as to form a rest for the glass strips. Nail the frame together, and put on the lower side of this frame a piece of wire-cloth cut 1-16 of an inch smaller than the frame, so there will be no wire edge; then have some thin slats ⅜ of an inch wide and ⅛ of an inch thick, lay the wire-cloth on the frame and brad these thin slats over the wire-cloth, so as to cover up the edge, and to hold it fast to the frame; this will make a smooth finish. Now you are ready for the partitions, which are ⅛ of an inch thick and ⅞ of an inch wide, and 3½ inches long. Nail these in from the side of the nursery at equal distances apart, and your nursery is complete.

I always have a nice lot of queen-cells after the first swarm issues; and to do away with after-swarms, I cut out all but one cell, or do some moving of the hive, and in the end only have but one queen. By using this rack I save all of them, and I am not bothered with after-swarms. These cells should be cut out very carefully and placed one in each department of the nursery, and each queen-cell should have a piece of comb honey put in with it. Now they are to be covered with a glass strip fitting each department.

This being done, place the honey-crate with the nursery, on the hive, and cover it up with a heavy blanket. These queen-cells should be cut out and placed in the nursery two or three days before hatching. By lifting the blanket you can see through the glass, and I think one would be surprised to see 28 nice, yellow queens, which can be seen if handled with care. If you cannot find 28 cells, put in what you can find, from 1 to 28.

In taking out one of the queens, lift a slip of glass, and hold an introducing-cage over the queen, when she will crawl up into it. There are no bees to bother with, for they cannot get above the wire-cloth bottom.

Aurora, Ind.

[Mr. Smith's “Queen Rack and Nursery” was duly received, and placed in the Museum. It is fully described above, so that the ordinary reader can grasp the idea with ease.—ED.]

For the American Bee Journal.

A Visit to Maryland.

HENRY CRIPE.

On May 29, 1884, I started on an excursion to Middleburg, Md., and as I gave some attention to bee-keeping and honey-plants, a short report may be interesting to some. I took the P. F. W. & C. railroad to Columbia City, and I saw only one apiary while riding through the State of Ohio, and that was in a little town of which I have forgotten the name. That was an apiary of about 110 colonies, and which appeared to be well cared for. I saw no honey-plants of special note through Ohio; and only in a few places along the road, in spots of several acres where the soil appeared to be very thin, white clover was abundant, the ground looking almost as white as snow. Near Pittsburg, Pa., along the Ohio river, it began to look pretty favorable for bee-keeping, but there were no bees that I could see. White locust was just coming into bloom, with which some of the mountains are thickly covered. Thus I passed on through the great Spruce Creek tunnel which is 270 feet under the ground, and ⅞ of a mile long. At Hagerstown I noticed a large apiary in nice condition; and at Blue Ridge Summit, which is located at a rather high point along this road, there is a good outlook for bee-keeping. Along the mountains are all kinds of wild flowers, and some basswood, but the latter is not so plentiful as in other places. At Middleburg, Frederick county, is as good an opening for bee-keepers as I have ever seen. Here locust was in full bloom, and bees were gathering honey at a rapid rate. Nearly all the colonies had begun to work in the boxes, some being nearly full; but this neighborhood has not a tenth part of the bees for which it would be able to furnish nectar. On my return I stopped about four hours in Hagerstown, and visited the apiary of Messrs. Valentine & Son, who were busily at work. They have about 175 colonies of bees, mostly Albinos, all in good working order. My departing time having arrived, I pocketed an Albino queen, and wishing Messrs. Valentine a prosperous season, I started for home, where I found the bees all right, but not gathering honey as fast as in the East.

North Manchester, Ind.

Bees at the Virginia State Fair.

One of the principal attractions at the State Fair at Richmond, on Oct. 22, will be the bee and honey exhibit. This feature will be shown under a mammoth tent, forty by sixty feet, with an annex twelve by twenty. Every bee-keeper in the South should turn out and witness this display, and the wonderful workings of these little busy bodies, which will be shown in glass cases so arranged that the transformation from the larva to the full-developed queen or mother-bee can be fully studied. One exhibitor will show eighteen cases of living bees, representing twelve species or varieties, with their queens and progeny, which alone will well pay any bee-keeper to attend the Fair. In addition, one of the latest and best systems of queen-breeding will be fully demonstrated and explained. In fact, the display will be a model apiary, conducted on scientific principles, by one of America's bee-keepers who has spent over thirty years in its study.

Transferring bees from a box, hive, or “gum” to the movable-frame hive, and all the manipulations necessary to conduct a first-class apiary, with a view to profit, will be fully and practically illustrated. Ye olden time broom-straw and box-hive adherents, turn out in force and witness this exhibit, and when you return home, it will be with the satisfaction of having spent the most profitable day in your existence. Think of the “sample box” of luscious nectar placed on exhibition by a lady who has managed thirty colonies this season, and, as her reward, over 3,000 lbs. of honey that will readily command $600 for her three months' work. Every lady in the land can handle bees just as well as this dame; and such “pin money” is not to be sneered at. Let every lady visiting the Fair *inspect* this exhibit.

Another exhibit will be a pyramid of honey produced by a prominent Virginian, representing over three hundred pounds, the product of one colony of Bellinzona bees, this season. Several other exhibitors will contribute machinery, beeswax, honey and bee-keeping appliances, making the exhibit the finest ever seen in this country. A collection of hives of the very latest design for profit and ease of manipulation will repay the trouble of inspecting by any bee-keeper of the South.—*Southern Planter.*

SELECTIONS FROM OUR LETTER BOX

A Good Report.

My yield, this year, is from 16 colonies, spring count, and is 733 pounds of comb honey and 62 pounds of extracted honey. Over 700 pounds of it was from 10 colonies. The largest yield, 130 pounds, was from a colony of hybrids. I now have 26 colonies.

R. E. HOLMES. ⊸

West Winsted, Conn., Oct. 8, 1884.

Tar-Weed.

Here is a specimen of one of our autumn honey plants. Please give its botanical name in the BEE JOURNAL. J. W. STUART.

Sonora, Cal., Sept. 23, 1884.

[It is *Hemizonia virgata*, one of the so-called Tar-weeds.—T. J. BURRILL.]

A Louisiana Hive.

I would like to explain, through the BEE JOURNAL, the hive which I use. I claim that it is the very best hive of any in use for producing extracted honey. It is 22x20½ inches and 10½ inches high, holding fifteen frames. The frames are 20x9⅛ inches. During a good honey-flow, the bees will fill these fifteen frames with sealed honey every week, and five of these hives wil average forty gallons of honey per year. Now, the reasons why I claim that this hive is better than a two-story one are these: The bees will store more honey in them more readily than in others and will do it in less time. 2. They are more easily made and handled, as well as being cheaper than others. A. V. LENNOX. ♀

Plaquemine, La., Oct. 4, 1884.

Only One-Third of a Crop.

We have only about one-third of a crop of honey this season, or about one-half as much as last year. After apple bloom everything failed until heart's-ease blossomed. Smart-weed was almost worthless. The average was about 25 pounds comb and 20 pounds of extracted honey per colony.

T. A. HOUGAS. ♀

Henderson, Iowa, Oct. 10, 1884.

The Season and my Honey Crop.

I started in the spring with 60 colonies, and I now have 100 strong ones. I have taken 2,300 pounds of comb, and 1,000 pounds of extracted honey besides what we have used in our family (which is quite an item, as the children are very fond of it, and the parents think it not unpleasant to the taste), having had it on the table three times a day for nearly every day in the year. I see many very discouraging reports in regard to the season, such as those of Messrs. Heddon and Doolittle. Although the season for surplus honey here was very short, it has been as good as the average. The most of the surplus was gathered in the month of June, as there was not a pound of basswood, and but very little buckwheat honey on account of cold, north winds throughout the basswood season, and dry weather during the buckwheat season. Here, the price of honey is very low on account of the anxiety of many producers, because of the large surplus in June. I hold best extracted at 10 cents per pound, and best comb honey at 16 cents. The price in Grand Rapids is only about 12½ cents for the best comb honey. A. P. COWAN. +o

Grattan, Mich., Oct. 3, 1884.

Report for 1884.

In the fall of 1883 I put 9 colonies into clamps, and last spring took them out and found 2 dead, and all but 2 had the diarrhœa. Before the opening of spring I had lost all but 4, and 2 of the latter were very weak—having only the queens and a handful of bees. I increased them by division to my original 9, and have taken about 300 pounds of extracted and 100 pounds of comb honey, and they are all now in good condition for winter. I took all of my extracted honey from supers. WM. F. WARE. o~

De Witt, Neb., Oct. 4, 1884.

An Average Season.

The last winter was the worst one for bees in 4 years in this locality, the loss being about 40 per cent. My loss was 2 out of 16, but I had some weak colonies. This has been only an average honey-season. I have taken 1,050 pounds of honey, 100 pounds of it being comb, and the balance extracted honey. I now have 23 colonies in good condition for winter, with about 35 pounds of honey to the colony. I sold my honey at an average of 13 cents a pound. My best colony produced 175 pounds of extracted honey, and one swarm. I have one colony of Syrian bees, and I usually handle them without smoke. It is the strongest colony that I have. I hope that I shall be able to tell you more about these bees next fall.

B. W. PECK. 6

Richmond Centre, O., Oct. 8, 1884.

Unprofitable Season.

Bees have done poorly this season. The colonies which did not swarm stored from 25 to 35 pounds of honey. Those that sent out swarms produced little or none; neither did the new colonies store any in the boxes. The fall bloom was very profuse, and the weather has been warm; but contrary to all previous experiences, very little honey was gathered. It is said by some bee-men and women, that one might just as well expect milk and butter from a cow without feed as honey from bees without feed. I supposed that it was the business of bees to gather honey from flowers and not to store away sugar and different kinds of syrups and to be called honey; nor did I think such could be honestly sold for honey. I do not propose to feed bees for honey, nor to watch the queens to see whether they are lazy and unprolific, or the reverse. Their ways are beyond my comprehension, and I propose to let them keep house as is most agreeable to themselves, and in the future spend as little money on them as possible.

Waverly, Mo. A. M. CREEL. +o

Wintering Bees.

In my opinion the only practical method of preparing bees for winter is that described by Mr. A. H. Dutton in the BEE JOURNAL of Oct. 1, 1884. As much as has been written concerning the wintering of bees, in my judgment, nothing came so near the proper way as that given by Mr. D.

ROBERT CORBETT. 6

Manhattan, Kans.

Only a Drone.

Dr. J. N. Smoot is puzzled about a strange noise like a boy blowing in a bottle, emanating from one of his bee-hives. It was only a poor drone driven into a vacant part of the hive, by the workers, when the hive acted as a sounding-board, and the poor fellow gave vent to loud lamentations over the cruelty of his heartless sisters. I frequently have heard the same lugubrious sounds in my apiary this fall, after the bees began to drum out the drones. E. E. E.

Convention Notices.

☞ The Iowa Central Bee-Keepers' Association will hold their annual meeting in the Court House at Winterset, Iowa, on Friday, Nov. 7, 1884. All interested in bee-culture are requested to be present.

J. E. PRYOR, *Sec.*

A. J. ADKISON, *Pres.*

☞ The Mahoning Valley Bee-Keepers will hold their fall meeting in Ravenna, O., on Nov. 14, 1884. A cordial invitation is extended to all.

E. W. TURNER, *Sec.*

Newton Falls, O.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.

Oct. 15.—Northern Ohio, at Norwalk, Ohio.
H. R. BOARDMAN, Sec.

Oct. 22.—N. W. Ind., at Laporte, Ind.
A. Fahnestock, Sec.

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Oct. 28.—Southern Wisconsin, at Janesville, Wis.
J. T. POMEROY, Sec.

Oct. 31.—Northeast Mo., at Hunnewell, Mo.
A. Noland, Sec.

Nov. 7.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Nov. 10.—Will County, Ill., at Beecher, Ill.
Gustavus Kettering, Sec.

Nov. 14.—Mahoning Valley, O., at Ravenna, O.
E. W. Turner, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Virginia Bee-Keepers' Convention.

At the Virginia State Fair, to be held on Oct. 22-24, it is expected that there will be an unusually fine display of everything in the apiarian line; a great variety of bees and queens, smokers, hives, bees at work, etc. The wax-working department will be fully shown, from rendering the comb into wax, refining, and making into sheets, with samples of wax from the wax extractor from the crude to the sheets ready for the hive, together with the outfit of a full apiary.

The Agricultural Society is doing what it can to render this department an interesting feature of the State Fair, and by this means to supply the best practical information to persons desiring to keep bees, either as a business or to provide themselves with honey for home-use.

To carry this intention more fully into effect, the Society proposes that the bee-keepers of Virginia and other States shall hold a bee-keepers' convention on the third day of the Fair, October 24, for the full discussion of every matter connected with bees—food, handling, preservation, apiarian implements and hives, best varieties, etc.; and as this industry has now become of wide extent and importance, it is expected that there will be a large assembly of amateurs as well as professionals, and as the meeting will be open to all, much valuable information will be imparted to those who attend for the purpose of obtaining knowledge on the subject.

Convention Notices.

☞ The Tuscarawas County Bee-Keepers' Association will hold its next meeting at the apiary of Geo. F. Williams, in New Philadelphia, O., on Thursday, Oct. 23, 1884.

G. F. WILLIAMS, *Sec.*
A. A. FRADENBURG, *Pres.*

National Bee-Keepers' Association.

As has already been noticed, the next annual meeting of the North American Bee-Keepers' Association will be held in the city of Rochester, N. Y., Oct. 28, 29 and 30, 1884. Essays will be read as follows: "Wintering Bees," by W. F. Clarke, of Canada; "Nectar," by Prof. A. J. Cook, of Michigan; "Marketing Honey," by Thos. G. Newman, of Illinois; "Foul Brood," by D. A. Jones, of Canada. The committee has decided to use the balance of the time in discussing these and other questions of importance. Those who cannot be present, and have questions that they desire to have discussed or answered, will please send the same to the Secretary, Dr. C. C. Miller, of Marengo, Ill., or to Rochester, in care of the convention, on or before the first day of the meeting. Notice as to place of meeting will be given hereafter.

C. C. MILLER, *Sec.*
L. C. ROOT, *Vice-Pres.*

Convention at Chicago.

☞ The Northwestern Bee-Keepers' Association will hold its fifth annual convention at Owsley's Hall, northwest corner of Robey and West Madison streets, Chicago, Ill., on Wednesday and Thursday, Oct. 15 and 16, commencing at 10 a. m. on Wednesday, and holding five sessions. Those who have attended one of these annual re-unions will need no urging to induce them to come again; those who have not, should remember that Father Langstroth characterized the last meeting as "representing the largest number of large, practical and successful honey-producers of any convention that he had ever visited." This meeting being held during the Inter-State Industrial Exposition, reduced railroad fares may be had on nearly all of the railroads. W. Z. HUTCHINSON, *Sec.*
C. C. MILLER, *Pres.*

☞ The Northern Ohio Bee-Keepers' Association will hold their next meeting in the Council Chamber at Norwalk, O., on Wednesday, Oct. 15, 1884. H. R. BOARDMAN, *Sec.*

☞ The Northwestern Indiana Bee-Keepers' Association will hold their annual meeting in the city of La Porte, at Lay's Opera House, on Wednesday, Oct. 22, 1884, beginning at 10 a. m. Essays will be read as follows: "The preparation and wintering of bees in the cellar," by G. R. Tyrrell, President; "The profitable use of comb foundation," by Dwight Furness, Vice-President of Porter County, Ind.; "The preparation and wintering of bees on the summer stand," by A. Fahnestock, Secretary; "Introducing queens and how to get rid of fertile workers" will be subjects for discussion. A full attendance is requested. Ladies are specially invited. A. FAHNESTOCK, *Sec.*
G. R. TYRRELL, *Pres.*

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Oct. 13, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX Is dull at 26@28c on arrival.

C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11¼@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—There is little life to the market and a lack of firmness. Good comb honey is changing hands slowly in a jobbing way at 8@9c. Choice extracted is offering at 4¾c., without finding buyers. White to extra white comb, 9@10c.; dark to good, 6@8c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 25@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—Our market is at present overstocked with honey, large quantities having been brought in wagons, and every place is filled up. Some lots have sold as low as 9c. for 1-lb. sections of white comb. We have not changed prices, but find sales very slow at 16c. for best white 1-lbs., and 14c. for 2-lbs. Dark honey we are offering as low as 10 to 12c. without being able to effect sales. Extracted is not wanted at all, and no sale at any price.

BEESWAX.—28@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 15c; extracted, 7@7½c.

GEO. W. MEADE & CO., 213 Market.

KANSAS CITY.

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☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

Special Notices.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

TRIAL SUBSCRIBERS.—The Weekly BEE JOURNAL will be sent to any *new* subscriber in North America from now until the end of 1884 for 25 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

☞ My advertisement in the AMERICAN BEE JOURNAL brought all the orders that I wanted, and many more than I could fill, except for selected breeding-queens. We have had heavy rains and the weather is intensely hot. I fear the rains are too late to help our bees much. G. W. DEMAREE.
Christiansburg, Ky., Oct. 3, 1884.

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☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly BEE JOURNAL for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

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We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
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and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
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Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
British Bee Journal	3 75..	3 50
The 7 above-named papers	8 25..	7 00

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It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

We have had some bound in Russia leather, with colored edges—price 60 cents.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

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It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

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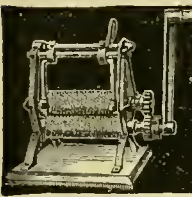

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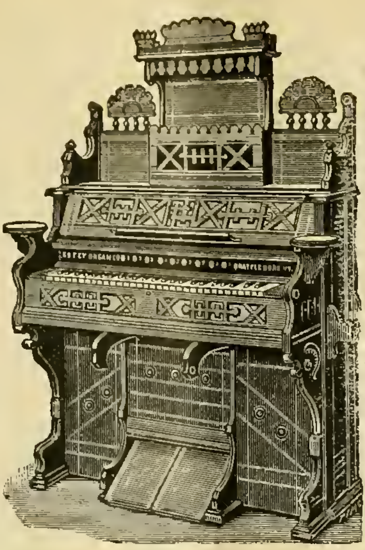

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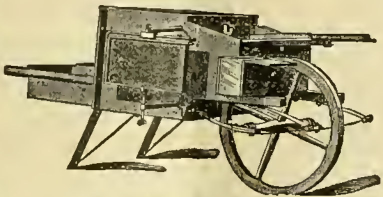

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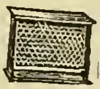

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Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
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How to Avoid them,
Clothing—what to Wear
How much to Wear,
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1868. 1884.

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Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

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Write and get my present low terms. I pay highest market price in

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OLDEST BEE PAPER IN AMERICA

THE WEEKLY

BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., October 22, 1884.

VOL. XX.—No. 43.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **50 cents.**

Entered at the P.O. as Second-Class matter.

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Club Rates for the Weekly are: $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

Club Rates for the Monthly are: two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70: five copies for $2.00; more than five copies for 40 cents each.

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Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

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THE AMERICAN
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ESTABLISHED IN 1861

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

To Canadians.—We take Canadian money for subscription or books; and Canadian postage stamps may be sent for fractions of a dollar.

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To Australia—Weekly, $1: Monthly, 20 cents.

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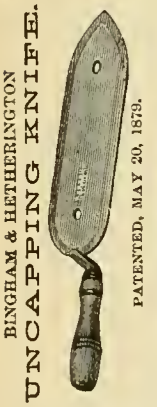
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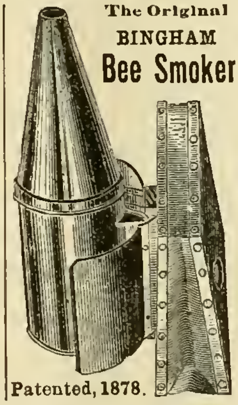

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The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, **$2** per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., OCTOBER 22, 1884. No. 43.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
Editor and Proprietor.

The North American Convention.

☞ Mr. William Williamson, of Lexington, Ky., writes us that he has been in correspondence with the authorities of the World's Exposition at New Orleans, La., relative to the holding of the next meeting of the National Convention next March at that place, instead of in the fall.

Under date of Oct. 4, 1884, Hon. G. C. Brackett, Superintendent of the Farm and Garden Products, writes as follows: "If the National Bee-Keepers' Convention is called at New Orleans, during the Exposition, I can only assure you of a cordial welcome, and every reasonable courtesy which the management of the Department of Agriculture can give you. This Department includes the apiarian interest in its provisions. I shall be pleased to receive your further communications bearing upon this matter in detail."

If the National Society desires to accommodate the bee-keepers of the South, and at the same time to place the pursuit to advantage before the world, here is a grand opportunity for it to do so.

◆

☞ Married, on the first day of October, 1884, at the residence of William Coulter, at Black Oak Grove, by Elder E. S. Riley, Mr. Ira Bull, of South Liberty, to Miss Ida B. Coulter; all of Indiana. Many elegant presents were made, and the wedding festivities were very interesting. The bride and groom have our best wishes.

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☞ Messrs. J. VanDeusen and Son, of Sprout Brook, N. Y., were at the Chicago Convention last week.

Maine Bee and Honey Show.

From the *Home Farm* we glean the following concerning the Maine show:

In the upper story of the main building, in the west wing, was the display of bees, bee-equipments, and literature, under the superintendency of Mr. Horace B. Cony, of Augusta. This department, although not very large, was extremely interesting, and during the Fair was visited by scores of those directly interested in practical bee-culture, and by hundreds who came out of curiosity and to learn of the habits and management of these thrifty workers. The principal exhibits were made by Jas. B. Mason, of Mechanic Falls, E. P. Churchill, of North Auburn, Edward Tarr, of Castle Hill, T. F. Blaisdell, of Fort Fairfield, and G. W. P. Jerrard, of Caribou, whose exhibit is included in the special exhibit of Aroostook county, on the second floor.

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Canada Bee and Honey Show.

At the Toronto Fair the splendid bee and honey show attracted much attention this year. The Toronto *Mail* gives a lengthy notice of it, from which we extract the following items:

Mr. Jones exhibited about 30,000 pounds of honey, a vast quantity of which was in cans, beautifully labeled; and in addition to this he presented a wonderful exhibit of apiarian supplies, arranged in a pyramid in the centre of the honey house, which attracted much attention.

Another pleasing feature was introduced by Mr. Jones, by the exhibition of not fewer than forty different kinds of honey-producing plants, showing, as they did, that Canada has more honey-plants than any other country in the world. The uninitiated or novice in bee-farming has only a very crude idea of the extent of our honey-plants, which include many known only thoroughly to the busy bee, whose duty and pleasure it is to find them out.

As an evidence of Mr. Jones' faith in the development of bee farming in Canada, he has lately increased his productive power of apiarian supplies by an expenditure of $8,000 or $10.000 on new machinery, including a new Corliss engine, manufactured expressly for him by Messrs. Inglis & Hunter, of this city.

Among the other exhibitors of honey was Mr. Hall, of Woodstock, who succeeded this season in having gathered about 16,000 pounds, but in order to do this he was compelled to greatly increase his stock, owing to the coldness of the honey season.

Messrs. William Ellis, of St. Davids, Ont., Mr. Geo. Tye, of McPherson Avenue, North Toronto, and Messrs. Granger & Duke, of Deer Park, North Toronto, were also exhibitors of the nectar. Each of these exhibitors secured prizes for various classes of honey, the latter getting a prize for fruit preserved in honey instead of in sugar, the usual method. Mr. Goold, of Brantford, also showed a few apiarian supplies. Altogether the exhibit of honey and apiarian supplies was well worth inspection, and more especially by those contemplating bee-farming as a lucrative and enjoyable occupation.

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☞ From the Chicago *Tribune* we copy the following item: "The yield of the apiary of H. C. Parks, of Riverside, San Bernardino County, California, is the most remarkable on record. From 33 hives 7¼ tons of honey were obtained, an average of 439 pounds to the hive."

There is a large crop in California this year, and 439 pounds is a large average, but *not* "the most remarkable on record," when we remember that it is on "record" that B. F. Carroll, in Texas, had 1,200 pounds of honey to the colony, in 1883.

◆

☞ The B. & O. Red Book for Illinois is ready for distribution, and in more than one respect, is the most valuable of any of the editions hitherto based upon this State. As has always been the rule, the forwarding of a stamp to C. K. Lord, Baltimore, is all that is necessary to secure a copy, and in fact the only way, as the Red Book issues are all for mail circulation. The present volume is replete with political statistics and condensed data, not only as regards the Presidential, State and Congressional elections in this State, but relating as well to elections since admission into the Union. It will be difficult to imagine a more complete showing of past results in the State, or a more neatly put together and printed little book.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Northwestern Bee-Keepers' Society.

The Northwestern Bee-Keepers' Society met at Owsley's Hall, Chicago, Ill., on Wednesday, Oct. 15, 1884, at 10 a.m., Pres. C. C. Miller in the chair.

The annual fee was reduced to 50 c.

The Secretary's and Treasurer's reports were read and adopted.

The following became members :

Geo. Asher, Naperville, Ill.
L. Adams, Mayfair, Ill.
Wm. Blake, Buchanan, Mich.
S. N. Black, Clayton, Ill.
Geo. Bischoff, Burlington, Ill.
T. S. Bull, Valparaiso, Ind.
Wm. Burrus, Buchanan, Mich.
H. D. Baker, Prairie Centre, Ill.
A.J.Cook, Agricultural College, Mich
T. W. Dougherty, Wyanet, Ill.
P. J. England, Fancy Prairie, Ill.
Jas. Forncrook, Watertown, Wis.
H. W. Funk, Bloomington, Ill.
A. Fahnestock, La Porte, Ind.
Dwight Furness, Furnessville, Ind.
Chas. H. Green, Berlin, Wis.
S. E. Gernon, Waukesha, Wis.
I. E. Gere, Riceville, Wis.
J. A. Green, Dayton, Ill.
Frank Gunderson, Alderly, Wis.
Mrs. C. H. Green, Berlin, Wis.
James Heddon, Dowagiac, Mich.
W. Z. Hutchinson, Rogersville, Mich.
J. M. Hume, Macomb, Ill.
Richard Hyde, Alderly, Wis.
J. Hendricks, Spring Grove, Ill.
Mrs. L. Harrison, Peoria, Ill.
Gottfried Harseim, Secor, Ill.
J. L. Harris, Wheeler, Ind.
Dr. J.B.Hawks, Arlington H'ts, Ill.
F. H. Hannah, Hinsdale, Ill.
John Hodgson, Jr., Pewaukee, Wis.
Frank B. Hesse, Bartlett, Ill.
L. Highbarger, Adeline, Ill.
Aug. Jensen, Channahon, Ill.
Geo. W. Jones, West Bend, Wis.
R. Johnson, Valparaiso, Ind.
G. B. Lewis, Watertown, Wis.
W. C. Lyman, Downer's Grove, Ill.
J. G. Lucas, Kingston, Ill.
J. R. Lindley, Georgetown, Ill.
E. Lucas, Kirkland, Ill.
Dr. C. C. Miller, Marengo, Ill.
James M. Marvin, St. Charles, Ill.
S. J. McKinney, Burlington, Iowa.
Thos. G. Newman, Chicago, Ill.
B. F. Newcomb, Roger's Park, Ill.
Oatman Bros., Dundee, Ill.
H. W. Lee, Pecatonica, Ill.
Helen C. Platt, No. Manitou, Mich.
W. F. F. Petty, Pittsfield, Ill.
Abraham Pontious, Akron, Ind.
J. Stewart, Rock City, Ill.
Geo. Thompson, Geneva, Ill.
D. C. Spencer, M. D., Augusta, Wis.
Mrs. W. A. Smith, Chicago, Ill.
A. M. Strong, Naperville, Ill.
C. Schrier, Peotone, Ill.
Mrs. M. E. Spencer, Augusta, Wis.
J.O.Shearman, New Richmond, Mich
E. F. Schaper, Chesterton, Ind.
Miss Sara Shibley, Richmond, Ill.
N. L. Stow, South Evanston, Ill.
Jacob Schumm, La Porte, Ind.
Wm. T. Smith, La Porte, Ind.
Mrs.S.L.Thomas, Plattsmouth, Neb.
G. R. Tyrrell, La Porte, Ind.
I. A. Travis, Lyons, Wis.
T. L. Von Dorn, Omaha, Neb.
Rev. Daniel Whitmer, So.Bend, Ind.
Dr. J. A. Walker, Mason City, Ill.
E. Whittlesey, Pecatonica, Ill.
L. C. Wemple, North Evanston, Ill.

Different Races of Bees.

The first topic discussed was the different races of bees.

Geo. Thompson : I prefer the Syrians, or a cross between them and the Italians.

Prof. A. J. Cook : We have had very conflicting reports regarding the Syrians. Mr. Frank Benton, as, perhaps, many of you are aware, says that there is a difference in these Eastern bees, depending upon the locality from which they come ; and that only those bees which come from Syria should be called Syrians. This may explain why there are so many different opinions. Then, again, the Syrians so closely resemble the Italians that many may have Italians when they think that they have the Syrians. At the College we find them very gentle. I do not object, so much as some, to a cross, and I think that much may be gained by a judicious crossing. We secured a Carniolan queen, last year, with the intention of crossing the Syrians with the Carniolans, but the queen died, and we shall have to try again. I do not think that any one should condemn any race of bees until he has tried them.

James Heddon : Is there any difference in the appearance of the Carniolan and the German bees ?

Prof. Cook : There is a slight difference.

James Heddon : They very much resemble the German race, do they not ?

Prof. Cook : Very much, indeed.

James Heddon : I think that there are, perhaps, only two distinct races—the black and the yellow, and the Carniolans are of the dark color. Before introducing a new strain of bees into a large apiary, I should like to know something in regard to the bees, otherwise much loss might result. Such men as Prof. Cook, with an experimental apiary, are the ones to try these new varieties. I am strongly in favor of the German bee, it builds such straight, white combs, and in these days of cheap honey, we must look out for every advantage, otherwise we are "left." I almost wish, sometimes, that I had never had a yellow bee in my apiary.

When to Put Bees in the Cellar.

Upon taking a vote, it was decided that Nov. 1 was too soon to put bees into the cellar.

James Marvin : I do not think that Nov. 1 is too early. If left out, the bees fly about, consume more honey, and weak colonies are liable to be robbed. I have kept bees in a cellar six months, and had them come out in fine condition.

Prof. Cook : If one has no cellar, and circumstances are such that he cannot have one, what shall be done ?

Mr. Adams : I have a cellar built above ground, the walls being double and made of building paper.

Dr. C. C. Miller : Perhaps it is not in order, but I presume that Mr. Heddon is loaded to the brim upon the subject of wintering.

James Heddon : This question of wintering is not one of cellars, ventilation, hives, pieces of laths, sticks, quilts and cushions over the combs—what kills our bees is diarrhœa ; and the question is, "What causes bee-diarrhœa ?" When that question is settled, then these minor topics of ventilation, protection, humidity, etc., will be easily settled.

Securing Statistics.

Upon this subject Prof. Cook said : I have been informed that, if the proper steps were taken, we could secure statistics of the honey crop through the medium of the crop correspondents.

After considerable discussion, Mr. Von Dorn moved that the President appoint a committee consisting of one person from each State, coming under the jurisdiction of the Northwestern Bee-Keepers' Association, and that this committee be empowered to take the proper steps for securing the legislation necessary to have honey included in the crop correspondents' report. The motion was carried.

Mr. Black moved that this committee be empowered to make an effort to secure proper legislation upon the subject of foul brood. Carried.

How a Cell is Filled with Honey.

Dr. D. C. Spencer : In my observatory hive one cell was built against the glass, and that afforded an excellent opportunity of seeing how bees deposit honey in the cell. First, a bee deposited a thin coating of honey upon the base of the cell, making a sort of varnish, as it were, to the base of the cell. The next bee that came with honey, raised up the lower edge of this film of honey and forced its honey beneath this film ; the next bee did the same, and this film acted as a kind of diaphragm, keeping the honey in the cell. When the cell is full enough to be sealed, the bees commence contracting the opening with wax, until there is only a small hole left in the centre, when they appear to take one little flake of wax and pat it down over the opening. At any time during the process of filling the cell, the honey could be withdrawn with a hypodermic syringe, and the "diaphragm" left hanging in the cell.

Reversible Frames.

James Heddon : I have used, the present season, two or three thousand reversible frames, but it will require at least another season to decide many points in regard to them. Of one thing I feel certain, and that is, that one reversal will pay for the extra cost in the solid framefuls of comb thus secured. This point is settled ; reversal will induce the bees to attach the combs to the bottom-bars. Then there is the question of reversal of sections ; if done at the proper time, it secures their completion and attachment to the bottom-bar, which is now the top-bar of the sections. In the forepart of the season, the queen and bees are inclined to fill the brood-combs with brood and store the honey above in the sections ; then if the brood-combs are reversed, the bees will carry up the honey and fill the combs with brood, thus securing more brood and stronger colonies in smaller hives, and the honey in the sections. If the sections are reversed during the honey-flow, it will secure their completion. As the season draws to a close, breeding is carried on less extensively, and the bees are inclined to carry the honey into the brood-combs; to reverse now would only hasten the operation of bringing the honey down from the sections and storing it in the brood-nest.

Dr. Miller: I am not particularly interested in the reversal of brood-combs, but I am interested in the reversal of sections, as it secures the attachment of the combs to the bottom-bars, and the honey can be shipped with greater safety; and if it secures the finishing of unfinished sections, I shall be more than pleased.

James Heddon: I have tried reversing sections, and if done early enough in the season, it will secure their completion. I reverse the whole case at once. I do not advocate reversing sections. I am working out another plan, with prospects of success, by which I can get all sections uniformly and completely filled with honey.

Pres. Miller: Please give us the plan.

James Heddon: It is not yet fully developed, and I protest against casting upon the public, partially-worked-out systems.

The convention adjourned to meet at 2 p. m.

AFTERNOON SESSION.

The convention was called to order at 2 o'clock, President Miller being in the chair. The first question discussed was:

Queen-Excluding Honey-Boards.

W. Z. Hutchinson: I have used, for two years, ten of the perforated zinc honey-boards. They are the old style, or Jones' perforated zinc. The first year no queens passed through, this year two queens passed through. I prefer, however, a honey-board of thin wood, having perforations or slots made with a saw of exactly the proper thickness. Bees can pass more readily through the same sized aperture, in a thin zinc sheet, than one in a ¼-inch thick, wooden honey-board. I have found that the old style, or Jones' perforated-zinc, has exactly the right-sized apertures for a wooden honey-board. I have, the present season, used 60 of these wooden honey-boards, and not one queen has passed through. I have managed some hives with no honey-boards at all, some with perforated zinc, some with the Heddon slat honey-board, and, as I just said, some with honey-boards of thin wood perforated with a saw, and I have been unable to discern that there was any preference so far as the amount of honey stored was concerned. I prefer the wooden honey-board, because it is cheaper, and is more rigid, thus keeping the bee-spaces perfect.

James Heddon: I have used the queen-excluding honey-boards, both metal and wood, and for the production of comb honey, I do not think that I care for them. With my skeleton or slat honey-board, in which the openings come directly over the centres of the top-bars, thus breaking the connection, and preventing the building of brace combs between the brood-frames and the bottom-bars of the sections, I have so little trouble with queens invading the sections, that I do not care for a queen-excluding honey-board; but when it comes to the production of extracted honey, the queen is almost certain to enter the upper story and "spread herself," and it is possible that a queen-excluding honey-board is a good thing here. There is another point, though, right here, and that is, if the queen is allowed to "roam at her own sweet will" all over a large hive, there is less likelihood of the bees swarming.

Pres. Miller: Well, Mr. Heddon, whether or not queen-excluding honey-boards shall, in the future, be pronounced a success, I wish to thank you for your skeleton honey-board. It keeps the sections so nice and clean, and enables us to remove the sections from the hive with so little trouble and daubing.

Size of Sections.

James Heddon: I have experimented considerably with half-pound sections, and I think that I shall use more of them in the future. Of one thing I am positive, and that is, that I can get just as much honey in a small as in a large section. It is not a question of the amount of honey to be secured, but of the cost of sections, foundation and manipulation. I can secure 3 cents more per pound for my one-half pound sections, and sell them much more quickly; but for all that, we do not want all half-pound sections, and I should not advise everybody to go to using them.

Dr. Spencer: I have received 5 cents more per pound for my half-pound sections. The restaurants are the best customers for the half-pound sections.

How Far Apart to Establish Apiaries.

E. J. Oatman: Our apiaries are four miles apart.

James Heddon: This is what I should like to know: How many colonies shall I have in one apiary before establishing another? and when I do establish another, how far out shall I go? This is really a question of overstocking, and of how far bees can fly and store honey profitably.

Dr. Miller: Let me ask how many there are who would not think it profitable to keep more than 75 colonies in one apiary?

Two members held up their hands. Five members would not have more than 100 colonies, and three would not have more than 150.

J. O. Shearman: Much might be said in regard to pasturage, seasons, etc.

James Heddon: We take all this into consideration; but I would like to know how many think that bees will fly two miles and store honey profitably?

Ten members thought that two miles is as far as bees could work at a profit; fifteen put the distance at 2½ miles; seven put it at 3 miles; while four thought that they might place the distance at 5 miles.

Bee Pasturage.

Dr. Miller: Does it pay to raise plants for honey alone?

S. N. Black: It has paid to raise buckwheat, and to scatter the seed of catnip or sweet clover along the roadside and in waste places.

A. J. Cook: I wish to speak in favor of the Rocky Mountain bee-plant. It blossoms after white clover and basswood, is very hardy, and yields honey abundantly.

Dr. Miller: While it may pay to raise plants for honey, the question arises, will it not be still more profitable to establish new apiaries where nature has already done the planting? Mr. Oatman has answered that question, practically, by moving out.

James Heddon: Where bees are kept, honey-producing plants are more perfectly fertilized; hence, where bees are kept, honey-plants will increase; but I do not think that it will pay to raise plants for honey alone, upon land that can be used for raising corn, oats, wheat, potatoes, etc.; yet I would not discourage the scattering of seeds of honey-plants in waste places.

A. J. Cook: But we do not know from experience, whether it is really profitable or not to raise plants for honey alone. Perhaps men may yet demonstrate, with a large crop of honey, that it does pay to raise plants for honey alone.

Dr. Miller: I have tried an acre of figwort. I kept it carefully cultivated one year, the plants thrived finely, and the bees worked upon it almost incessantly, but the use of the land and the cultivation is too expensive. The next year I dropped the cultivation, and the plants dwindled, and, comparatively, amounted to but little. I sowed 20 acres to sweet clover, but it did not come up so well as I could have wished, and various causes have prevented it from attaining the proper growth. If the seed is sowed along the edge of the wagon tracks, just at the line where the grass begins, it will come up well, but it does not germinate and grow when sown upon a pasture. However, sweet clover is the one plant in which I have not entirely lost faith.

T. L. Von Dorn: In our locality, Rocky Mountain bee-plant was once plentiful, but now it is seldom seen.

A. Fahnestock: I think that it is foolish to raise weeds, when we can just as easily raise crops that will produce honey. I have raised Alsike clover, and found it one of the best of honey-producers.

S. N. Black: I have tried Alsike clover, but it produced no honey, and soon died out.

J. L. Harris: I have tried Alsike clover, and found it so very profitable that I am furnishing the neighboring farmers with seed.

James Heddon: As you have raised some Alsike clover, now what per cent. of your honey crop do you think comes from it?

J. L. Harris: Perhaps 1 per cent.

James Heddon: Now, then, Mr. Harris, do you not think that this furnishing of seed to your neighbors will have a tendency to create bee-keepers, with whom you will have to divide your field; and you will thereby lose more than the 1 per cent. that you now gain?

J. L. Harris: Oh, that phase of the business has been gone through with in my locality. When my neighbors saw me getting good crops of honey, they, of course, must "do so too," and they engaged in business just long enough to get a taste of honey, and now they buy their honey of me. One touch of winter losses, and they dropped bee-keeping. There will be no trouble of that kind, Mr. Heddon.

Comb Foundation.

A. Fahnestock: In the brood-nest, I would use foundation that is about 6 feet to the pound.

James Heddon: When wax is warmed it expands; when firmly attached to the top-bar, of course the upper edge cannot expand, and, as the lower part of the sheet expands and the upper does not, it waves and curls; for this reason we wire the frames. Years ago, many bee-keepers said that they did not need wired frames, foundation did not warp, nor curl nor sag with them, they were satisfied: but now they use wired frames. Then, again, what is "good enough" for one man does not satisfy another. I want foundation upon which I can hive a prime swarm, close up the hive, and not open it again for a year, and then find every comb as straight as a board.

S. N. Black: I would use 8 feet of foundation to the pound.

H. W. Funk: I would not use it lighter than 5 feet to the pound.

J. A. Green: I would use 5 feet to the pound unless I used wired frames, when I would have it 7 or 8 feet to the pound.

A. Fahnestock: I have tried using one-half sheets, that is, filling the frames one-half full of foundation, and the bees fill out the frames with drone-comb.

James Heddon: If we should use narrow strips of foundation for starters (and, if necessary, I would pay $5 per pound for foundation for this purpose), perhaps it would be well to have two or three rows of cells of drone-comb next to the top-bar, and then have it changed to worker-comb. This might satisfy the bees, and, being next to the top-bar, it will be filled with honey most of the time.

T. L. Von Dorn: I use no wires, and my foundation never stretches nor sags.

Geo. Thompson: Some bee-keepers have thought it unprofitable to use foundation in the brood-chamber.

James Heddon: The question is, whether or not the secretion of wax is voluntary with the bees. We have made no experiments upon this subject, but expect to during another season.

Prof. Cook: We have tried hiving swarms of the same strength, both with foundation and upon empty frames, and those with foundation stored the most honey. To secrete wax in the largest quantities, bees must have repose, hang themselves up in a cluster, and not be compelled to work. We would not secure much milk from our cows if we worked them; it is the same with our bees, in regard to wax-secretion.

J. A. Green: When bees are hived upon foundation, I do not find any wax scales upon the bottom-board, but I do find them quite plentifully when hiving them upon empty combs.

Honey-Dew.

Prof. A. J. Cook: In many parts of the country there have been, during the present season, quantities of honey gathered which originated in the plant and bark-louse. That from the plant-louse is quite fine and agreeable honey when compared with that from the bark-louse. We had some at the College, and nearly all of the students liked it; but we would not put it upon the market. We let a baker try making some cookies with it, telling him what it was, and, after a trial, he bought all we had at 7½ cents per pound.

President Miller: Well, Professor, to come down to the practical, what shall we do with this honey-dew question.

Prof. Cook: Do? Why, rejoice and be glad! It comes early in the season, stimulating the bees, thus giving us strong colonies early in the season, and, as I just said, the honey can be used by bakers, or it might be kept until spring and fed to the bees to stimulate them. That from the plant-louse I should be willing to risk as a winter food, but not so that from the bark-louse, which is abominable stuff. Just as soon as the bees can gather honey from the flowers, they desert the "honey-dew," then the combs shoul be emptied with the extractor. I would advise bee-keepers to be on their guard another season. It is all foolishness to say that honey-dew "rains down;" it is either from some insect or vegetable origin.

The convention adjounred to meet at 7 p. m.

EVENING SESSION.

President Miller being absent, Mr. T. G. Newman took the chair, by request.

Increase of Colonies.

James Marvin: Why have increase at all, when there is no market for it? I prevent increase by hiving a swarm into a hive from which a swarm has issued a short time previous.

Geo. Thompson: I have my queens' wings clipped. When a swarm issues, I catch the queen, cut out the queen-cells, wait until the swarm returns, and then allow the queen to run in at the entrance. If they swarm again, I repeat the operation, and continue to do so until the bees give up swarming. In this manner I can prevent increase almost entirely.

W. Z. Hutchinson: Did you never have the bees kill the old queen, rear another, and then swarm?

Geo. Thompson: No, sir.

James Heddon: I think that I stated, years ago, that I could secure more honey by allowing my bees to swarm. A few years ago, a man in Texas secured 1000 pounds of honey from a single colony that did not swarm, and considerable bragging was done about it. I called attention to the fact that Mr. Vandervort had secured more than 1,000 pounds from one colony and its increase, and everybody said: "It is not fair, it is not fair. You must not count the increase;" and every one who shouted thus, virtually admitted that more honey can be secured by allowing increase. It is probable, however, that in those localities where there is only one honey harvest, and that comes early, more honey will be secured if there is no increase; but where there are three honey harvests, as in my locality, it certainly pays to increase, to the extent at least, of doubling the original number of colonies.

Secretary Hutchinson: For several seasons I have secured more honey from colonies (and their increase) that swarmed than from those that did not. This last season has been the only exception; and the reason is, that the honey-harvest came very early, was cut short by the drouth, and no honey was stored afterwards during the remainder of the season. My views in this matter have been very clearly expressed by Mr. Heddon.

Prevention of After-Swarming.

G. R. Tyrrell: I prevent after-swarming by introducing a laying queen, after the swarm has issued.

Secretary Hutchinson: A laying queen costs one dollar!

G. R. Tyrrell: Not if you rear her yourself, and have no sale for queens.

T. S. Bull: I prevent after-swarming by allowing a virgin queen to run into the hive as soon as the swarm has issued.

J. A. Green: I have practiced the Heddon-plan of preventing after-swarms (see page 126 of the BEE JOURNAL for 1883), and it worked to perfection. I have secured more honey when I allowed the bees to increase.

Dwight Furness: I, too, have tried the Heddon plan, and it is a perfect success.

Secretary Hutchinson: I have, for two years, practiced the Heddon method of preventing after-swarms, and I am more than pleased with it. I should like to know if there is any one present who has tried it, and has not been successful?

S. N. Black: It has not always been a success with me, but I think that it usually is a success.

A. Fahnestock: After a prime swarm issues, I take out the outside combs, extract the honey, and then return them to the centre of the brood-nest; this gives the young queen room to lay, and prevents swarming.

Secretary Hutchinson: As the young queen does not usually commence laying until about the 18th day after the swarm has issued, and the brood will all be hatched by the 21st day, it occurs to me that the queen will find plenty of room to lay in without extracting the honey.

James Heddon: I think that after-swarms are the results of quarrels among the young queens; and to avoid killing another queen, or being killed, a queen leads off a swarm. Now, I do not see how extracting the honey is going to prevent this quarreling. With my plan, the old colony is so reduced in numbers just at the time when the queens are hatching, that there are no bees to swarm, and the young queens are obliged to fight it out on the line of the "survival of the fittest."

Queenless Colonies.

The question was asked: "Will the bees of a queenless colony store as much honey as those having a queen?"

James Heddon: Perhaps it is not exactly understood what is meant by the term "queenless colony." Father Langstroth defines it thus: "A colony having no queen, nor the power of rearing one." And I do not think that the bees of such colonies work so well; neither do I think that bees that have simply been deprived of their queen, will work so well. Bees never work in the sections with such energy as when there is a laying queen upon the combs below. Bees do love to have their own way, and I think it best to humor them; either let them have their own way, or let them think that they have it, and never work contrary to their instincts, but with them. If colonies are divided, they sulk for awhile, and then when they get strong they swarm, thus having their own way. The honey-season was nearly over, one year, and a large number of nearly-finished boxes of honey were upon a hive containing a strong colony which had not swarmed, and I hoped that they would not, as I wanted the honey finished; but they swarmed. I said to myself, "This will not do. I must have that honey finished." So I removed the queen, and put the swarm back, or attempted to, for they hung out in the portico, and would not enter. I waited nearly all day, and then drove them in with smoke, and in a short time they were out again. I drove them in again, clear up into the boxes, in a little while they were out again, and those bees just laid their ears back and sulked, and stored no honey until they had reared a queen, when, as I ventured down town one day, they swarmed and went to the woods. Now, if I had hived that swarm, how they would have gone to work and filled their hive, and I should have secured more surplus honey, and had the increase "to boot." I give my bees plenty of air, by the way of wide entrances, give them shade, and room to work in the boxes—this discourages, but does not always prevent swarming. When it does not, I say, let them swarm, and then prevent after-swarming.

Tiering-up Sections.

J. A. Green: I have practiced tiering-up sections and I prefer that method.

Mr. Adams: I prefer that method.

Mr. House: When tiering-up one tier at a time, I like the method; but with wide frames containing two tiers of sections it has been unsatisfactory with me.

James Heddon: Years ago, closed-top sections were used quite extensively, now there is scarcely a call for them; this shows that the majority believe in the tiering-up system.

A. Fahnestock: I practice tiering-up. The first tier of sections that I put on contains closed-top sections.

Secretary Hutchinson: What covers the top of the second tier of sections, after the first tier is removed?

A. Fahnestock: Oil-cloth.

Mr. House: Why not have a bee-space above each tier of sections, and not have anything touch the top-bars of the sections?

James Heddon: There should be a bee-space, not only above the sections, but between each tier. This evening them up with oil-cloth, setting the sections down on the brood-frames, or allowing one tier of sections to touch another tier, is all wrong. I am astonished that in this day and age of the apiarian world, any one should go so far as to patent a hive allowing "continuous combs and continuous passage ways." Like Mr. Hutchinson, I say the bees put their propolis where two surfaces come in contact. If sections are covered with oil-cloth, the bees will put propolis where the edges of the top-bars come in contact with the cloth. When the cloth is removed and put down again, the bees will put in more propolis, and, as the process is repeated, more propolis is added until the cloth is finally so raised up that the bees can put great lumps of propolis between it and the sections. When one tier of sections come in contact with another, not only are bees killed when the case of sections is put in place, but propolis is put along the edges of the sections where they come in contact. Sections can, of course, be set down in contact with the tops of the brood-frames, but it is a great saving in jack-knives when removing the sections, and no more honey is received; I know, for I have tried it.

Separators.

A vote was taken, and about three-fourths of the members could dispense with separators; one-fourth wanted them.

Mr. McKinney: I have tried separators and discarded them, and it is my observation that many others are doing the same.

James Heddon: We have used a large number of one-story broad-frames, in supers with separators, and a large number of cases in which no separators were used; and although there are advantages and disadvantages in separators, yet they have nothing to do with the amount of honey stored. Although only one-fourth of you now vote in favor of separators, the time may come when the vote will be the other way. If you can produce honey without separators so that it will suit yourself, your commission man, the consumer, and everybody, all right; if you cannot, then use them.

T. G. Newman: From the appearance of some of the honey on our market, I must say that many who do not use separators, *ought* to use them. A bee-keeper and myself visited a commission honey-house on South Water Street, in this city, and while there we saw a clerk showing a customer some comb honey. With his hatchet he pried loose a cover of a crate, and grasping a section near the center, drew it up. As he did so, the comb scraped against the adjoining combs, and instead of coming to view as "a thing of beauty," it came up dripping, dauby and disgusting. As long as there are so many careless bee-keepers it seems unwise to discourage the use of separators. If a bee-keeper can secure straight, neat combs without separators, (and I must admit that some of them do), well and good; if not, use them by all means.

James Heddon: It is certain that straight combs can be secured without separators. At the Mich. State Fair, our secretary and Mr. R. L. Taylor had fine displays of comb honey, all built without separators. It was really finer than my own, and it was these gentlemen who secured all the premiums upon comb honey, although their honey was in competition with several lots of separatored honey.

The convention adjourned to meet at 9 o'clock on the following morning.

MORNING SESSION.

The meeting was called to order at 9 a. m. by President Miller. The first topic was:

Susceptibility to Bee-Poison.

President Miller: The more we are stung the less susceptible we become; at least this is the case in the majority of instances. Whether this is a desirable stage to reach, I do not know. It is possible that the aches and ills, rheumatism and neuralgia, from which some suffer, are the effects of our system being filled with bee-poison.

S. N. Black: If I were going to be stung very much, I should be compelled to abandon the business. I do not wear a veil, but by washing the face and hands with ammonia, alcohol, salt and water, or something of that sort, bee-stings can be greatly avoided.

James Heddon: The first stings cause the flesh to swell; after the system becomes filled with the bee-poison, such is not the case, and I am inclined to agree with the President that rheumatism and neuralgia are caused by the system being brimful of bee-poison. It is acknowledged by all, that ammonia is the best remedy for animal poisons, and the best advice that I have, is to carry a bottle of it, and, when stung, scrape, not pull out the sting, put the mouth of the bottle over the wound and invert the bottle.

A. Fahnestock: I found that soda wet with saliva is an excellent application.

S. N. Black: The best remedy that I ever tried is spirits of turpentine.

Secretary Hutchinson: My remedy is a tincture of plantain leaves, prepared by covering the fresh leaves with alcohol, allowing it to stand until the alcohol turns dark, then pour it off and bottle it. I seldom use it myself unless stung near the eye, but it entirely prevents swelling and pain when applied immediately after being stung. If severely stung, a few drops can be taken internally.

STATISTICS.

Mr. T. G. Newman, who had prepared a table showing the increase of bees for the year, and also the production of comb and extracted honey and beeswax, by request, read the totals, and the statistical table was made a part of this Report.

CELLAR VS. OPEN-AIR WINTERING.

Twenty-five members voted in favor of cellar-wintering, 15 for the open-air, and 12 voted both ways. When the latter were asked for an explanation, they said that sometimes bees wintered better in the open air; at other times better in the cellar.

After some more discussion in regard to upward ventilation, downward ventilation, quilts, cushions, sticks, size of cellar, etc., the following question was put: "Is the cause of bee-diarrhœa in the food?" Twenty-six members voted yes; five voted no.

James Heddon: Now, how many of the 26 who think that the cause is in the food, think that the cause is pollen?

Eleven held up their hands.

James Heddon: Now, of the 26 who think that the trouble arises from improper food, but do not think it pollen, how many can tell what it is?

J. O. Shearman: Perhaps sour honey may cause it.

H. W. Lee: If pollen causes bee-diarrhœa, why do not the bees suffer from it every winter? They have pollen in their combs every winter.

James Heddon: Bee-diarrhœa is caused by an overloading of the intestines. Fall honey does not produce it, for I have had my bees winter tip-top on fall honey, and had them die, rotten with diarrhœa, when they had fine, thick basswood honey. Cider does not cause bee-diarrhœa. I have wintered my bees with stores from cider. Cider may ferment, but you cannot overload a bee's intestines with "fizz." Bees do not have diarrhœa every year, because they do not eat the pollen every year. Sometimes the pollen appears to be dried down hard, glazed over, as you might say, and when the cells are filled with honey, on top of the pollen, the pollen mixes but slightly with the honey, the bees eat out the honey and leave the pollen intact; at other times the pollen appears more soft, something like mush, and partially mixes with the honey, so much so that were the honey extracted, considerable of the pollen would come with it. When the pollen is thus mixed with the honey, does it not appear reasonable that the bees should consume more pollen than when the pollen is hard and unmixed with the honey? Again, should the cold weather confine the bees for a long time in one particular place upon the combs, until they had consumed the honey, would they not be more than liable to consume some of the pollen? Cold and confinement, although aggravating causes, are not the primary causes of bee-diarrhœa; else, why were bees in Indiana and Southern Michigan swept away, and we had to go to Northern Michigan to buy bees with which to replenish our apiaries? Pollen is a nitrogenous food, needed for building and repairing tissue, but it is not a heat-producing food; hence, it is not needed in winter when a carbonaceous food is needed. Pure cane-sugar is the best food known to us for winter stores for bees. To give them this we put empty combs free from pollen into a hive, shake the bees into it, put on a feeder and feed them sugar syrup; taking the combs of honey to the honey-house and extracting the honey. We hope, however, by using a small brood-nest, to secure brood-combs so free from both brood and pollen, at the end of the season, as to render extracting unnecessary.

Adjourned till 1 p. m.

AFTERNOON SESSION.

President Miller called the meeting to order. The first topic was:

MOVING BEES.

T. L. Von Dorn: I move bees upon a hay-rack. I nail fast the ends of the frames, but put no hay under the hives.

J. O. Shearman: In hot weather bees need water as well as air; it should be sprinkled upon them.

President Miller: I moved a colony in cool, fall weather, with no ventilation.

J. A. Green: I have moved bees successfully in the hottest weather by covering both the top and bottom of the hive with wire-cloth.

Secretary Hutchinson: I took several colonies to our State Fair, covering the top only with wire-cloth, and the bees died fearfully; another exhibitor, who had wire-cloth on the bottom as well as top, lost but few. Mr. T. F. Bingham, who was present, said that there should be a 3-inch space between the wire-cloth and the frames, both above and below.

STANDARD WIDTH OF SECTIONS.

The majority preferred sections seven to the foot when used with separators, and 1½ inches wide when used without separators.

BROOD-NEST IN THE FALL.

Mr. Bull: Simply put the brood below and the honey above.

James Heddon: If we are working for extracted honey, and the queen is allowed access to the supers, there is less likelihood of bees swarming. If managing bees in this manner, I would, near the close of the season, put the brood below.

EXTRACTED VS. COMB HONEY.

After considerable discussion, the majority decided that about twice as much extracted as comb honey could be obtained from a given number of colonies.

TEMPERATURE FOR BEE-CELLARS.

The decision arrived at was, that the proper degree was that at which the bees remained the most quiet. The majority thought that 42° was, usually, about right.

FOOD FOR BEES IN WINTER.

James Heddon: I weigh the sugar, and, to every ten pounds of it I put 6 pounds of water. I put the water on the stove to heat, and when it boils, I put in a piece of tartaric acid as large as a small hickory nut, to each ten pounds of sugar, then stir in the sugar and bring to a boiling heat. If the feeding is to be done late in the season, when it is probable that it will not be sealed over, I put in only 3 pounds of water to 10 pounds of sugar. The acid and the boiling are to prevent the crystallization of the sugar.

FEEDING BACK EXTRACTED HONEY.

J. A. Green: I have tried feeding back extracted honey to secure the completion of unfinished sections. At first the bees work well, but they soon seem to tire of it and loaf around and live out of the feeders.

Secretary Hutchinson: Last year I reported success in feeding back. This year I have fallen so far short of last year's success that I begin to consider feeding back an unsolved problem. There is a difference in colonies, some doing good work, others not.

S. N. Black: I have tried it, and it required the feeding of five pounds of extracted to secure one pound of comb.

President Miller: We sometimes have sections that are almost finished, and perhaps it might be advisable to feed back to secure their completion, even if the feeding did give us only one pound of comb for five of extracted. I have fed 400 pounds, the present season, but the result was unsatisfactory, and, in the future, I think that I shall leave the experimenting to others.

James Heddon: There need be no loss on unfinished sections; extract the honey and put them away until the "honey shower" comes from next season's basswood, and you will have a bonanza in those sections. I made quite a good many experiments this season—have weighed the feed, the sections, the hives and brood-nests; have fed hot and cold feed, thin and thick feed, but as yet, I look upon feeding back as in an experimental stage, and the prospects not bright at that. I fear that those who advocate feeding back have not counted the cost of feeders, and the fuss, trouble, bother, muss and waste of feeding back.

The election of officers resulted as follows: President, Dr. C. C. Miller, Marengo, Ills.; Vice-President, Mrs. L. Harrison, Peoria, Ills.; Secretary, W. Z. Hutchinson, Rogersville, Mich.; Treasurer, T. G. Newman, Chicago, Ills.

The Convention adjourned to meet on the Wednesday and Thursday of the last week of the Chicago Exposition in 1885.

W. Z. Hutchinson, *Sec.*
Dr. C. C. Miller, *Pres.*

STATISTICAL TABLE

OF

BEES AND HONEY FOR 1884,

Represented at the Northwestern Convention.

Names and Addresses.	COLONIES.		Honey Crop—lbs.		Bees-wax.
	May.	Oct.	Comb.	Extract'd	
L. Adams, Mayfair, Ill.	47	64	12	18	10
Geo. Asher, Naperville, Ill.	70	90	300	4,000	25
Wm. Burrus, Buchanan, Mich.	110	145	2,500		40
T. S. Bull & Son, Valparaiso, Ind.	116	190	1,000	10,000	100
Wm, Blake, Buchanan, Mich.	118	178	5,000		15
H. D. Baker, Prairie Centre, Ill.	27	50	1,560		
S. N. Black, Clayton, Ill.	50	52			15
Geo. Bischoff, Burlington, Iowa.	30	35	500	500	30
Prof. A. J. Cook, Agr'l Coll., Mich.	12	20	80	380	10
T. W. Dougherty, Wyanet, Ill.	89	130	400		100
P. J. England, Fancy Prairie, Ill.	54	44	25	900	10
J. Forncrook, Watertown, Wis.	14	17	600		
H. W. Funk, Bloomington, Ill.	165	240	1,855	5,350	40
D. Furness, Furnessville, Ind.	35	65	1,700	500	20
A. Fahnestock, La Porte, Ind.	5	10	100	100	5
J. E. Gere, Riceville, Wis.	9	34			
S. E. Gernon, Waukesha, Wis.	78	125	4,500	800	40
Chas. H. Green, Berlin, Wis.	160	271	5,695	450	15
Frank Gunderson, Alderly, Wis.	30	39	50	2,500	10
J. A. Green, Dayton, Ill.	118	118	2,400	6,400	
F. H. Hannah, Hinsdale, Ill.	16	26	303	667	
J. L. Harris, Wheeler, Ind.	21	55			
G. Harseim, Secor, Ill.	70	165		216	18
L. Highbarger, Adeline, Ill.	50	80	1,500	500	10
Dr. J. B. Hawks, Arlington H'ts, Ill.	45	68		4,000	50
W. Z. Hutchinson, Rogersville, Mich.	68	108	4,700	200	75
Frank B. Hesse, Bartlett, Ill.	7	16			
James Heddon, Dowagiac, Mich.	400	460	6,000	1,000	
J. M. Hume, Macomb, Ill.	5	9			
Richard Hyde. Alderly, Wis.	115	155	1,800	10,000	100
J. Hendricks, Spring Grove, Ill.	18	40	800		
R. Johnson, Valparaiso, Ind.	60	84	800	2,000	25
Aug. Jensen, Channahon, Ill.	12	13		1,500	40
Geo. W. Jones, West Bend, Wis.	110	150	300	7,000	100
H. W. Lee, Pecatonica, Ill.	183	212	3,000	9,000	100
J. G. Lucas, Kingston, Ill.	25	37			
J. R. Lindley, Georgetown, Ill.	30	61	110	1,000	25
E. Lucas, Kirkland, Ill.	70	120	5,000	600	10
W. C. Lyman, Downers' Grove, Ill.	3	8		85	
James M. Marvin, St. Charles, Ill.	100	130		3,000	
S. J. McKinney, Burlington, Iowa.	20	18	125	100	
Dr. C. C. Miller, Marengo, Ill.	200	300	10,000		70
B. F. Newcomb, Rogers' Park, Ill.	3	6	40	215	25
Oatman Bros., Dundee, Ill.	544	682	30,000		
W. T. F. Petty, Pittsfield, Ill.	86	110	1,500	1,500	25
Abraham Pontious, Akron, Ind	60	75	400		
C. Schrier, Peotone, Ill.	32	46	1,103	200	3
Jacob Schumm, La Porte, Ind.	11	23	550		
W. T. Smith, La Porte, Ind.	8	15	400		
J. Stewart, Rock City, Ill.	86	130	1,200	1,700	
D. C. Spencer, M. D., Augusta, Wis.	40	53	1,500	1,000	
J. O. Shearman, New Richmond, Mich.	94	130	4,000	500	20
E. F. Schaper, Chesterton, Ind.	55	75		2,000	25
N. L. Stow, South Evanston, Ill.	2	8	150		
Mrs. S. L. Thomas, Plattsmouth, Neb.	40	70	1,000	1,000	
Geo. Thompson, Geneva, Ill.	35	40	300	500	
I. A. Travis, Lyons, Wis.	66	103	1,000	1,200	25
G. R. Tyrrell, La Porte, Ind.	21	48	1,700	250	10
T. L. Von Dorn, Omaha, Nebr.	75	150	150	700	25
L. C. Wemple & Son, N. Evanston, Ill.	15	23	100	1,000	5
Dr. J. A. Walker, Mason City, Ill.	40	52			50
E. Whittlesey, Pecatonica, Ill.	63	74	2,250	1,200	15
Rev. D. Whitmer, South Bend, Ind.	100	157	2,000	1,500	25
Rosa Whitmer, South Bend, Ind.	1	2	12		
Totals	4,462	6,304	112,070	87,231	1361

CORRESPONDENCE

For the American Bee Journal.

"Killed by a Bee-Sting."

C. G. BEITEL.

On page 636 is chronicled the death of a Mrs. Sturdevant, of Fairfield, Fayette County, Iowa, alleged to be caused by the sting of a bee, to which spirits of camphor had been applied. This recalls to the mind of the writer a case, which, although not fatal, was pronounced a case of apoplexy.

In last May or June, a lady of our borough, aged about 40 years, and who takes a great interest in bee-culture, frequently attending to a number of colonies kept by her son, was stung by a bee on the forehead. She at once applied camphor liniment which kept down the swelling, but she soon became very sick; the symptoms were vomiting, purging, bulging of the eyes, failure of vision, painful palpitation of the heart, and momentary unconsciousness. A physician was called in, and pronounced it a stroke of apoplexy. Nothing was said or thought of the bee-sting at the time, as she had frequently been stung, always resulting in but simple swelling, soft mud or clay usually being applied. In the course of three days the lady had completely recovered.

In a week after the above occurrence, she was again stung on the hand. She again applied the camphor liniment, and the symptoms as above stated again followed. This time she thought of the liniment, and, of course, attributed the result to that, and in order to satisfy herself, after she had entirely recovered, she voluntarily allowed a bee to sting her again, and applied, not the camphor liniment, but soft mud as at first, and the result was a simple swelling, since then she has frequently been stung with no serious results.

The writer is not a physician, nor is he a chemist, but he is a sincere friend of the bee, and as such, would fain protect its character, and allow no unjust accusations to rest upon it, and would be exceedingly pleased, did Dr. Tinker, or some other able scientist pass his opinion upon this subject.

It seems to the writer that these two cases, so much alike, point in the direction that camphor is not an antidote to bee-poison; on the contrary, that it is an assistant or co-operant—or whatever else in medical parlance it might be called—of the poison.

I have simply stated facts, withholding, by request, the lady's name, which, if necessary, will, however, be freely given upon application to the writer.

Easton, Pa.

[We believe that a diseased condition of the system is the cause of death, accelerated, of course, by the "poison" introduced by the sting. Soft mud or clay has been successfully used as a remedy. Will Dr. Tinker please reply about the camphor.—Ed.]

For the American Bee Journal.

New Method of Uniting Nuclei.

G. M. DOOLITTLE.⊙

Many plans have been given for wintering nuclei or weak colonies in the fall, the best one of which was to move the little colonies to be united toward each other a foot or so each day until they were brought together; so that after uniting (by alternating the frames, or otherwise mixing the bees up so that they would not quarrel), they would occupy so nearly the same place which they did before uniting, that no bees would be lost by their going back to their former location, which they always will do unless some precaution is taken. This plan involved a large amount of work, especially if the nuclei were far apart, and it would often happen that they did not occupy such a position that they could be thus brought together at all. When the work was considered too great, or the colonies could not be moved a little each day, they were carried and united at once; and to avoid having the bees return to their old location, a wide board was leaned against the hive in front of the entrance, so that the bees would see that they were in a new spot by bumping this board, if they attempted to fly without marking where they were. With me, many bees would return to the old spot in spite of these precautions; and, although, heretofore I have always used these plans, yet I have never been quite satisfied with them.

In looking over the first volumes of the Bee Journal, not long ago, I chanced to turn to page 11 of Vol. 4, where E. Gallup tells "how to make natural swarms artificially," by first smoking the bees and then alarming them by rapping on the hive with a stick, thus causing them to fill themselves with honey. After they were filled with honey, they were, the larger part of them, to be drummed into the cap of the hive by the means usually pursued in drumming out bees. When they were gotten in the cap, the cap was taken and carried to where the swarm was to be located, where it (the cap) was to be set leaning up against something for about an hour, at which time they were to be hived the same as any natural swarm, when, he says, "they will work precisely like one in every respect."

Having a large number of nuclei to unite this fall, I thought, "Why can I not use something similar to this plan, in uniting?" but I found that I could not make queenless bees stay until I could get two or more nuclei put together, at which time I wished to give them such a queen as I desired. After considerable study, proving of no value at the end of an experiment, I chanced to think of what I had read of the traffic in bees by the pound, and applying this to the Gallup plan, I soon saw that I could control the bees as I pleased. Accordingly I went to a tinsmith and told him I wanted a funnel made 14 inches in diameter at the top and slowly tapering to a 2½-inch hole in the bottom, which hole was to have a 2-inch piece of 2½-inch conductor pipe soldered into it. I next made a box by getting out two pieces of wood 9 inches long by 8 wide by ¾ of an inch thick, and two other pieces 14 inches long by 9 wide by ¼ thick, which were nailed to the first two pieces so as to form a box 14 inches long by 9 wide by 8 deep, without sides. I next got two pieces of wire-cloth 14 inches long by 8½ wide, one of which was permanently nailed to one side of the box, and the other piece was nailed to strips of wood ¼ of an inch square, and then placed around the outside of it, after which it was fastened to the other side of the box by means of a small wire nail being driven through each of the strips of wood into the box, so that four nails held it nicely; still it could be easily pried off. I next bored a 2½-inch hole through the centre of the top for the funnel, over which hole I fixed a tin slide. Near one end I bored a 1-inch hole through which I could drop the queen that I wished to put with the united bees, which hole I closed with a large cork.

Thus rigged, I proceeded to a queenless nucleus and blew a little smoke into the entrance, after which I struck 5 or 6 heavy blows on the top of the hive, when I went to another and did the same thing. I next waited a minute or two for the bees in the first hive to fill themselves with honey. As soon as they were filled, I proceeded to shake them into the funnel which had been placed in the hole in the box, when as fast as they struck the sides of the funnel, they rolled into the box below. In this way I soon had all the bees in that nucleus (except a few that were in the corners of the hive, or that might take wing before they struck the funnel) in the box, when I went to the next one I had smoked and served it in the same manner. However, before doing this, if I wished to put more than two together (I often use 5 or 6 nuclei to form one colony), I would smoke the next one the same as I did the first, so that each could be filling with honey while I was shaking the previous one into the box. When I had all that I wished in the box, the funnel taken out and the hole closed, I proceeded to get the queen I wished for them, when, by a sudden jar of the box, I brought all the bees down on the bottom, at which time I immediately uncorked the small hole and put in the queen. I now rolled and tumbled the bees about in the box until all were mixed up, when the box was put in my bee-cellar and the door closed so all was dark, when it was left until sunset, when a hive was prepared with combs of sealed honey sufficient for their winter stores.

Next I brought the box from the cellar, took off the movable wire-cloth side, dumped out the bees and hived them as I would a natural swarm. If I did not have enough combs of sealed honey for all, I gave empty combs and fed enough sugar syrup for winter. By making four such boxes I soon had my nuclei all united in the best possible manner, and all the bees would stay where put—provided all were well-filled with honey. I find this part very essential, for if they are only partially filled, they are inclined to be cross, and a few will go back to the old stand upon the first flight; but if all are well-filled none will return. If they have not all the honey that they can hold, I jar them down as I did to put in the queen, when ¼ of a pound of syrup or honey is turned in upon them, and by rolling them about each gets a share till all are filled.

Borodino, N. Y.

For the American Bee Journal.

"Honor to Whom Honor is Due."

W. Z. HUTCHINSON.☌

It may "tear agape the healing wound afresh," but I feel that I *must* say a few words in self-defense upon the above subject.

Mr. Fradenburg says that he has never claimed that he first discovered the "pollen *theory*," but that he was the one who first discovered that pollen was the *cause* of bee-diarrhœa. This is getting it down pretty fine; but is the assertion *true?* *Is* Mr. Fradenburg the one who first discovered that pollen is the cause of bee-diarrhœa?

On page 536, Mr. F., himself, admits that he does not consider his experiment as the "first;" if so, why does he claim to be the one who first discovered that pollen is the cause of bee-diarrhœa? Farther along, upon the same page, he says that the discovery upon which he bases his claim was made on Jan. 31, 1884. Mr. Heddon had previously reported experiments that were as conclusive as this experiment of Mr. Fradenburg's. Considering all this, is it not strange that Mr. Fradenburg should put forth the claim which he does?

Mr. Fradenburg says that the report of his experiment (the one upon which he bases his claim), made during the winter of 1883-84, was published prior to Mr. Heddon's report of *his* experiment of the same winter; in this he is mistaken, as he will see by turning to the *Kansas Bee-Keeper* of June 1, 1884.

Mr. F. quotes from *Gleanings* to show that he (Fradenburg) publicly hinted, prior to Mr. Heddon, that pollen might be the cause of bee-diarrhœa; but it appears, from reference to the *Bee-Keepers' Instructor* for February 1881, that Mr. Heddon was more than a month ahead of him.

LATE SWARMING.

In reply to the questions of Mr. Gresh, on page 599, I would say that I have had no experience with September swarms, and I know of no practical method of controlling swarming at such times; *i. e.*, of preventing the issuing of first swarms when working for comb honey. Neither do I know how swarming can be delayed earlier in the season, aside from what can be done by shading, ventilation, and giving plenty of room.

Rogersville, Mich.

For the American Bee Journal.

The Pollen Theory.

DR. C. C. MILLER. ♁—200, 300.

I have been watching with interest the pollen discussion, quite inclined to the belief that pollen may be at least a prominent factor in the wintering problem. A case coming under my observation puzzles me to explain in accordance with the pollen theory. On Feb. 20, 1884, I found one of my colonies dead in the cellar. Upon examination I found not a very large colony, some drones among the bees, a few cells of sealed brood (evidently drone-brood in worker-cells), not a drop of honey in the hive, and more or less pollen in every comb. The pollen had a fresh and shiny appearance, as if the honey had just been taken from it. There was no trace of diarrhœa about the hive or combs. Every comb appeared as sweet and clean as if it had just been taken from a healthy colony.

Some of the facts which I have here given may have no bearing on the case, but I have thought best to give full details. The main points are, that here was a colony apparently starved to death with plenty of pollen easily accessible, and no appearance of diarrhœa.

On the supposition that pollen is the only or the main cause of bee-diarrhœa, the question arises, "Did these bees eat all the pollen that they could, so long as life lasted, without being affected by diarrhœa? and, if so, cannot all bees eat it with the same immunity? Or did these bees finish their honey, and then starve rather than eat enough pollen to injure them? and, if so, do not all bees act in the same way? Or, is there some other explanation of the affair?"

Marengo, Ill., Oct. 10, 1884.

For the American Bee Journal.

"Does it Pay to Use Foundation?"

W. M. WOODWARD. ♁

I take strong ground in favor of the use of comb foundation as a means of profit in the management of an apiary. Mr. U. E. Dodge, I see, is also a doubter of the profit in its use, and calls for the showing in dollars and cents. Mr. D. might have seen the benefit and profited by its employment had he not failed to comply with the first great principles of its use for profit.

First, why are bees profitable at all? Simply because they will gather and store more sweets than they consume. If it is shown that foundation aids them to store more honey in a given time, and that honey in a marketable shape, then the case is decided; otherwise the proposition fails. I believe that both of these may be done. There are several principles which underlie all profit in the production of comb honey: 1. That the size of the brood-chamber should correspond with the present wants of the queen, allowing no space to be filled with honey, and thus blocking up against the increase of brood.

2. That the brood should be wrapped in, as it were, with surplus receptacles.

3. That there be absolutely no impediment to the bees in carrying the honey away from the brood-chamber.

4. That the heat be uniformly distributed throughout the hive.

5. That ventilation be amply provided for, without requiring many bees to fan air in or out.

Mr. Dodge certainly neglected the first of these principal conditions, according to his own statement; and I suspect the second, and probably the third also to some extent. Of what use were those 10 frames when they only served to store honey in, and block in the queen until, perhaps, she might even be compelled to go into the surplus receptacles for room? On the other hand, had Mr. D. taken the honey stored in the 10 frames, in the early part of the season (only to the detriment of his bees and of himself), in marketable surplus-honey, he would long since have seen the profit. Bees are profitable from the honey they gather, and whatever aids them to gather more, and store it in better shape, is profitable so long as it costs less than the gain. Comb foundation does that in two ways: First, by relieving large numbers of field bees to gather honey; and, second, by distributing the comb-builders over a much larger space to receive the honey gathered. Both of these propositions are proved by the speed with which a large hive may be filled.

I, too, had an experience in 1883, one that quite exceeds Mr. D.'s; but it did not prove anything to me against the use of foundation. I also hived several large swarms, some double ones, in 10-frame hives, and being afraid of brood in the surplus case, I waited two days after hiving, to put it on. But the bees were at work, and no inducement would tempt them from this work below until it was full; and at the end of six days one hive (which contained my choicest colony) was full of sealed honey, with about the space of a man's head filled with brood, and the queen thoroughly blocked in, and I did not extract. In ten days the colony began to reduce, and soon were unable to cover all their combs, and finally, every one so hived on ten full frames of comb foundation, died before spring opened, from cold weather, cold honey, or something else.

"But why let this thing go on so?" one asks. Simply to learn the lesson it teaches, and I learned it well. I saw that the foundation gave the bees great advantage of the queen, and that I must devise some plan by which to deprive them of the fruits of their labors, and preserve the equilibrium, and then all would go well. Had I given them 50 one-pound sections for honey, instead of the last seven frames, they would have been better off, and I richer 6 or 7 dollars per colony.

To meet such an emergency in 1884, I constructed about 30 division-board side-cases, taking sections crosswise, and used them, 20 sections in each side instead of frames, and gave the queens, with prime swarms, three frames for the first ten days. From several colonies I secured every pound of honey in sections which they stored, until the queens began to breed.

Every pound of honey can be taken in marketable shape, which any colony of bees can store, by granting only what room the queen actually keeps full of brood, and compelling the bees to work in sections so arranged as not to impede, but aid them in their work, and when that is done there will be no more crying down of comb foundation, but a searching about for better to aid them to perform quicker work.

The secret of profit lies simply in the taking away of the honey when stored, and compelling the bees to store it just where you want it. I will only add that if the foundation is ever paid for by the bees, the pay must be secured during the time required to build the same comb.

Custer, Ill.

For the American Bee Journal.

Bee-Keeping in Utah.

JOHN DUNN. +○

In my former letter I gave an account of our blighted prospects, and I can see from reading the BEE JOURNAL that it has not been confined only to Tooele, but other places have cause to complain, and can sympathize with us. I have just sent our fall report to the Territorial Convention, which meets to-night in Salt Lake City, and as far as I have been able to glean, the report for Tooele is, 851 pounds of honey, 214 colonies of bees, fall count, loss 38, and increase, 15. So you see that there will be no bragging in the *News* about the Tooele report for this year; but I am satisfied with the little that we have done, and hope to be able to give a more favorable report for next year.

The weather has been rather changeable, having had snow and rain at intervals for the past month, just at the time when the bees would have stored the surplus honey; although I think that the most of the bee-keepers have left the bees ample stores for their own winter use in the hives, and should they only come out all right in the spring, we will have little reason to complain.

Some have become discouraged and sold out very cheap, while others were willing to share the loss, and have even bought more bees. About a month ago I lost nearly a colony of bees in rather an amusing manner. A neighbor of mine has quite a herd of horses, and in order to be able to go after them, he generally kept up one or two horses to ride upon. So when he was away, one day, his wife being left in charge of a favorite horse of his, she tied it to the fence which separates his lot from mine, and rather close to my colony of bees. It was not long tied until it began to snort and paw the ground, which it continued, the people thinking that the flies were annoying it; but the snorting turned into a groan, and attracted the attention of my family, so they sent over to tell them to come and see what was the matter with the horse, for it was then lounging, rolling and groaning most pitifully. The bees having mastered the horse, they thought that they could serve the people in the same way, so they made after them, and it was a sight to see the people "make time." I not being on hand, they sent for all the neighbors; one came with a hay-fork and a broom, but he was soon seen flying, broom and all, in "double quick" time. In fact all was left *hors de combat*, until Mr. Craver, a bee-man, came prepared with gloves, veil, etc., but even then he got the javelins sent into him. They succeeded in getting the horse away, for the poor thing had been left to take its chances when all but it was gone, except the bees. The horse did not need to be tied up again, for in about two days after it died, thus ending its misery. I have not seen a horse around since, for I had told them not to tie too near the bees, or they might feel sorry for it. So, if the bees have not done much in the honey business, they have done something to create a stir.

Tooele City, Utah.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

That Strange Noise.

When Mr. Smoot made an inquiry about the noise, he gave me the impression that he referred to a louder and different noise than that made by drones. I well remember the drone noise, which we do not often hear now, as only a few of our choicest colonies rear many drones; full sheets of foundation being the cause.

Bees in Good Condition for Winter.

Will Mr. Heddon please answer the following questions:

1. Are queens which accompany after-swarms fertilized before or after leaving the parent colony?
2. Is buckwheat honey considered good for winter stores?
3. In extracting honey, do you "shake" the queen indiscriminately with the other bees at the entrance, when taking the combs from the hive? or would it be likely to prove injurious to her?

Bees have done finely in this section since July 20, and as hardly any swarming has occurred, they will go into winter quarters strong in numbers, and with stores to spare. I am using these stores to provision some fine colonies (belonging to some of my neighbors) which were doomed to the "brimstone pit," but I interposed, to the satisfaction of all concerned, giving them their honey and taking the bees which are doing well. Immediately after transferring, the queens almost invariably begin to lay.

E. K. DEAN.⚲
Amenia Union, N. Y., Oct. 4, 1884.

ANSWERS.—1. Afterward.

2. Not by all bee-keepers, but it is considered so by me.

3. We never have any fears in so shaking the queen down with the rest of the bees. We use and prefer the two-story system, and we smoke down most of the bees before taking out the combs for extraction. We seldom extract from the brood-chamber.

What to do with Boxes in Winter.

What do you do with boxes that have more or less comb in them? Would it do to leave them on all winter?

Waverly, Mo. A. M. CREEL.⊶

ANSWER.—I have no evidence that the leaving on of your boxes will injure your bees during the winter; but many experiments have proven such conditions to be favorable to wintering bees. It may, or may not injure your boxes and combs. If the bees remain healthy, it will not.

Feeding Bees.

Mr. Heddon and Mr. D. A. Jones both use tight-bottomed hives; but in feeding, Mr. Jones pours in the feed at the back end of his hive, after elevating the front a little; while Mr. H. always recommends using a feeder to be placed on top of the frames. Why does Mr. Heddon prefer the latter method? The Jones' system is the more convenient. E.

ANSWER.—Have you ever used, or seen used the top-feeder which I use? If not, how can you reasonably decide that the Jones' method is the most convenient? The reason I prefer the latter method, is because it has no tendency to excite robbing, whether the feed is all taken or not; also, because I can feed 15 or 20 pounds at one time, to each colony, and in less time than any man can pour one ounce in at the back end of any hive. Further, because I do not have to use the smoker, nor come in contact with the bees at all. I feel confident that the future will verify my decision.

How Far do Swarms Go?

Several years ago, and again last year, I lost a number of swarms of bees by their going away before hiving. I should like to learn whether there is any known way to recover such swarms. Also, what is the longest distance swarms have been known to go. I have read what most of the standard bee-books have to say on the subject, but can learn nothing definite about it. C. H. HOWARD.⊙

Raritan, N. J., Oct. 3, 1884.

ANSWER.—I know of no way to recover your runaway swarms. The best way is to prevent such runaways by a judicious use of the fountain pump. I have good and satisfactory evidence, that here, where we have woods interspersed all through our country, our swarms often go 25 to 50 miles before selecting a home. A swarm alighted on a ship's mast in the middle of our Lake Michigan.

Wintering Queens Alone.

Why cannot queens be kept over winter, each one by herself, *i. e.*, without any other bees being with her, and in a small box in the house where they will not freeze, yet being kept in a cool room? Of course, give to each their own honey to live on. I would like to know why that cannot be done with good results? WM. FOLKE.♂

Peotone, Ill.

ANSWER.—Of course, you could not keep them "in a cool room," because the temperature in such a room would be lower than that in a cluster of bees in winter. But why cannot we keep them in a proper temperature? A single bee cannot live in a state of isolation. It has been said, that it dies of lonesomeness. My own opinion is that it would die from a lack of animal magnetism, if from no other cause.

Spring-House Wintering of Bees.

I am an amateur in apiculture, and I am in doubt as to how I shall winter my bees. I have read the Monthly BEE JOURNAL for nearly a year, but have never seen spring-house wintering advocated. I happened to think of it last fall, and put one colony in the spring-house for an experiment, and the bees came out in the spring nice and strong. I had a chaff-cushion on the top of the frames to absorb the moisture, but it failed to absorb all of it. After experimenting some time, I found that the air inside of the hive was, on an average, 16° Fahr. warmer than the air at the entrance. The temperature of the water was 50° Fahr., so in order to have the bees 46°, I had to leave the spring-house door open a little; the air at the entrance, 30°, plus 16°, animal heat, equals 46°, at which temperature they kept very quiet. Does any one know any thing about spring-house wintering of bees? If so, please give a few hints concerning it. Is it a good and safe plan?

How about keeping the moisture absorbed? It formed in drops in my hive. This has been a very bad year for bees. Most of my neighbors keep a few bees, but there was very little increase, and not much honey. There were very few natural swarms. No fall honey was gathered, and the bees being almost starved, would come into the house and get into everything. A great many were killed. Is cider good for bees? The cider mills around here are just full of them. JNO. P. CONFER.+○
Yellow Springs, O.

ANSWER.—Special repositories (entirely above ground) for wintering bees, have been used for years, with varied success. They, like cellars, all sorts of out-door packing, and total neglect, will neither produce, prevent nor cure the disease, bee-diarrhœa—the one great cause of our winter losses. Whether I winter my bees in a cellar, or a double-walled house all above ground. I should like very much to have a spring therein, or a stream of water passing through the bee-room in as noiseless a manner as possible. It acts as a regulator of the temperature, and as a ventilator. On two or three occasions I have had my bees store a little cider in the hives, late in the fall, but never saw any bad results therefrom. I should, however, prefer that they would have none of it in their hives; I think it might work an injury in a secondary manner.

Not One-Fourth of a Crop.

We have not had one-fourth of a honey crop this year. There are but few bees in the country. Comb honey sells at 25 cents per pound, and extracted at 20 cents. Please give the best formula for making candy for winter feed for bees.

J. M. DOUDNA,+○—14, 42.
Alexandria. Minn., Oct. 11, 1884.

ANSWER.—If your case were my own, I should not feed candy, but granulated sugar syrup, made and fed as directed in numerous places of the BEE JOURNAL. It has been a long time since I have made any bee-candy; but I believe that I boiled down confectioners' A sugar to the point of consistency when it would "thread," as confectioners say, and then removed it from the fire and stirred it lively until the "dough" was pretty stiff, and then caked it in pound sections.

Convention Notices.

☞ The Southern Wisconsin Bee-Keepers' Association will hold its next meeting in the Court House at Janesville, Wis., on Oct. 28, 1884, at 10 a. m. It is hoped that all members will be present at this meeting.

J. T. POMEROY, *Sec.*
C. O. SHANNON, *Pres.*

☞ The bee-keepers of McDonough and adjoining counties are requested to meet at Bushnell, Ill., on Nov. 20, 1884, for the purpose of organizing a bee-keepers' association.

J. G. NORTON.

SELECTIONS FROM OUR LETTER BOX

Does Bee-Keeping Pay?

The honey crop was a total failure in this parish this year. On an apiary of 9 colonies, I lost $20, for I did not get one drop of honey, and the queens and labor cost me $20. In another apiary of 9 colonies not one drop of honey was obtained, but the bees had to be fed during the whole year. I could mention many more worse failures, but these will suffice. If this ever meets the public eye (but I doubt if it will, for our bee-paper editors like to keep dark things together hid), I hope all those who are embarking in bee-culture will "go slow," for it is risky business. I have been a bee-keeper for six years, and I am worse off now than I was at the beginning; but I will "try again," and let you know how I succeed in 1885. In 1879 I had 106 colonies, and in 1884 have 8. Now, the question is, "Does bee-keeping pay?"

ALVIN V. LENNOX.♀
Plaquemine, La., Oct. 7, 1884.

Experience with Foul Brood.

After reading the article on foul brood, by Frank R. Cheshire, in the BEE JOURNAL for Oct. 8, and knowing the effect that carbolic acid has on the human system, I esteem it my duty to donate to the National Convention, soon to be held at Rochester, the cause and harmless remedy for foul brood. Providence permitting I will be present in person.

N. N. BETSINGER.⊙
Marcellus, N. Y., Oct. 11, 1884.

Short Honey Crop.

My honey crop was very short this year. I got about 500 pounds of clover honey from 28 colonies, spring count; but got no fall honey, and only had 4 swarms in all. A. WORTMAN.~○
Seafield, Ind., Oct. 11, 1884.

Bees not Working.

I started in the spring with 70 colonies of bees, and have increased them to 95. My spring honey crop was a little over 3,000 pounds. Bees have been idle ever since Aug. 1.

JOHN FERSTEL.♀
Inglefield, Ind., Oct. 13, 1884.

Report for the Season.

The surplus honey season of 1884 is about closed in this vicinity; and as many bee-keepers report but a small crop, I deem my success in producing a large crop mainly due to constant care, and a perfect control of after-swarming, which is usually a great detriment in the way of producing comb honey. I commenced the season with three apiaries, situated from five to ten miles apart, in my own care, and report as follows: First, Pine Bluff Apiary of 65 colonies in Langstroth hives, run for comb honey in one-pound sections, produced 4,600 lbs. and increased to 110 colonies; and two colonies, run for extracted honey, produced 520 lbs., with no increase. Each of the latter occupied 30 Langstroth frames, and were not helped in any way except by receiving good care. One of them stood on scales during the honey season and produced over 300 lbs. of honey. Second, Rock Valley Apiary, 24 box-hive colonies, were transferred and increased to 38, and produced 1,400 lbs. of honey in one-pound sections. Third, Baraboo Apiary of 45 colonies, produced 6,000 lbs. of extracted honey—two-thirds of it being white honey. I increased them to 55 colonies. Summarizing the products of the three apiaries, I have, as total amount for the season, 12,620 lbs. of honey.

FRANK McNAY.⊙
Mauston, Wis., Sept. 1, 1884.

☞ Seeing that during the past season much interest has been manifested in the subject of bee-keeping, and believing it to be a profitable industry, and one that ought to be protected and encouraged, we have thought fit to call a meeting of those interested to meet in the Court House at Cynthiana, Ky., at 10 a. m., on Saturday, Oct. 25, 1884, for the purpose of effecting a permanent organization of the bee-keepers of this and adjoining counties, and for the mutual protection and information of its members, and the promotion and encouragement of apiculture. The meeting will be addressed by Mr. Chas. F. Muth, of Cincinnati, O., one of the most successful bee-keepers of this country, who will also assist in organizing the society. W. S. Cason, W. L. Godman, M. C. Swinford, J. J. Whiteker., Harvey Kearns, S. W. Collins.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts: per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 28-30.—North American at Rochester, N. Y.
Dr. C. C. Miller, Sec., Marengo, Ill.

Oct. 28.—Southern Wisconsin, at Janesville, Wis.
J. T. Pomeroy, Sec.

Oct. 31.—Northeast Mo., at Hunnewell, Mo.
A. Noland, Sec.

Nov. 7.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Nov. 10.—Will County, Ill., at Beecher, Ill.
Gustavus Kettering, Sec.

Nov. 14.—Mahoning Valley, O., at Ravenna, O.
E. W. Turner, Sec.

Nov. 25.—Western Mich., at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

National Bee-Keepers' Association.

As has already been noticed, the next annual meeting of the North American Bee-Keepers' Association will be held in the city of Rochester, N. Y., Oct. 28, 29 and 30, 1884. Essays will be read as follows: "Wintering Bees," by W. F. Clarke, of Canada; "Nectar," by Prof. A. J. Cook, of Michigan; "Marketing Honey," by Thos. G. Newman, of Illinois; "Foul Brood," by D. A. Jones, of Canada. The committee has decided to use the balance of the time in discussing these and other questions of importance. Those who cannot be present, and have questions that they desire to have discussed or answered, will please send the same to the Secretary, Dr. C. C. Miller, of Marengo, Ill., or to Rochester, in care of the convention, on or before the first day of the meeting. Notice as to place of meeting will be given hereafter.

C. C. Miller, *Sec.*
L. C. Root, *Vice-Pres.*

☞ The Tuscarawas County Bee-Keepers' Association will hold its next meeting at the apiary of Geo. F. Williams, in New Philadelphia, O., on Thursday, Oct. 23, 1884.

G. F. Williams, *Sec.*
A. A. Fradenburg, *Pres.*

☞ The Iowa Central Bee-Keepers' Association will hold their annual meeting in the Court House at Winterset, Iowa, on Friday, Nov. 7, 1884. All interested in bee-culture are requested to be present.

J. E. Pryor, *Sec.*
A. J. Adkison, *Pres.*

☞ The Mahoning Valley Bee-Keepers will hold their fall meeting in Ravenna, O., on Nov. 14, 1884. A cordial invitation is extended to all.

E. W. Turner, *Sec.*
Newton Falls, O.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Oct. 20, 1884

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX Is dull at 26@28c on arrival.

C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11¾@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY.—A moderate movement has been effected in extracted, within range of the same low figures which have been lately current. Offerings unplaced are still large. In comb honey there is nothing doing beyond a small jobbing trade.—White to extra white comb, 9@10 cents; dark to good, 6@8 cents; extracted, choice to extra white, 4½@5 cents; dark and candied, 4 cents.

BEESWAX.—Wholesale, 25@30.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¾c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—Our market is at present overstocked with honey, large quantities having been brought in wagons, and every place is filled up. Some lots have sold as low as 9c. for 1-lb. sections of white comb. We have not changed prices, but find sales very slow at 16c. for best white 1-lbs., and 14c. for 2-lbs. Dark honey we are offering as low as 10 to 12c. without being able to effect sales. Extracted is not wanted at all, and no sale at any price.

BEESWAX.—28@30c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6¼c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY—There has been a good demand with liberal receipts, and prices remain the same. Choice Eastern comb, ¾-pound sections, 18c; 1-pound, 16c; 2-pounds, 15c. California comb, 2-pound sections, 15c. Lower grades are slow at 2 or 3 cents less. Extracted, 6½@8c, according to quality

BEESWAX—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

Special Notices.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly Bee Journal for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly Bee Journal for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

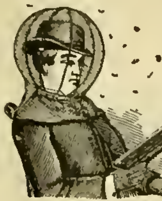
Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

Trial Subscribers.—The Weekly Bee Journal will be sent to any *new* subscriber in North America from now until the end of 1884 for 25 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

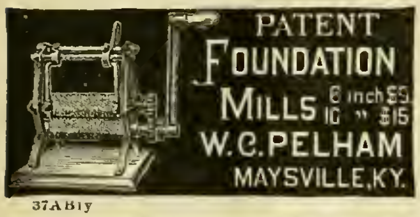
☞ The "Autumn Leaves" which will bring the most returns are, no doubt, the Leaflets—"Why Eat Honey?" Scatter them and see the effect in selling honey in every neighborhood, at good prices. Two hundred will be sent postpaid for $1.00; 500 for $2.25; 1,000 for $4.00.

A NEW BEE-VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.



PATENT
FOUNDATION
MILLS 6 inch $5
10 " $15
W. C. PELHAM
MAYSVILLE, KY.

37A1y

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

Sixth Thousand Just Published!

New and Enlarged Edition
OF
BEES and HONEY,
OR THE
Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,
Editor of the Weekly Bee Journal.
925 West Madison Street, Chicago, Ill.

It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

PRICE—Bound in cloth, $1.00; in paper covers, 75 cents, postpaid.

☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN.
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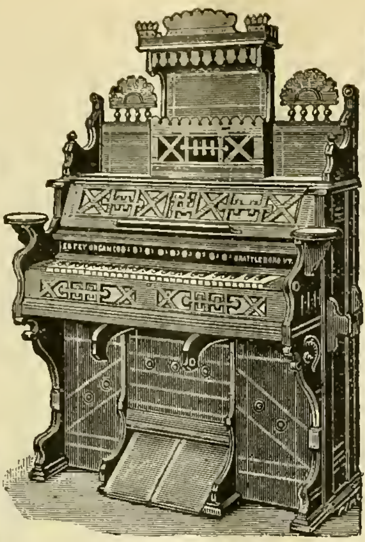

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The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.

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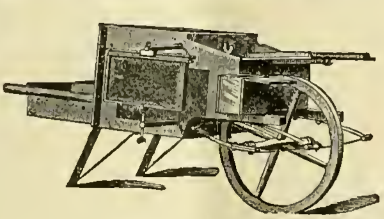

DAVIS' PATENT HONEY CARRIAGE,
REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only............$18.00.

For sale by **ALFRED H. NEWMAN,**
923 West Madison Street, CHICAGO, ILL.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**

☞ Send 10c. for Practical Hints to Bee-Keepers.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine.
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HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 28 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

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Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
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IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chilblains, Cold Feet, Corns, Coughs, Cholera, Diarrhœa, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only 25 Cents. Sent by Mail, post-paid,
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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1ABtf HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Land-Owners, Attention!

All persons who have lost Real Estate in Iowa, by reason of TAX OR JUDICIAL SALES, are invited to correspond with **BICKEL & BULL,** Attorneys at Law, 41 First Ave., **Cedar Rapids, Iowa,** and they will learn something to their advantage.

1868. 1884.

HEDDON'S

COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

QUEENS!

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from	$ 3 00
Untested	1 25
Untested, after July 1st	1 00
Untested, (per doz.) after July 1st	11 00

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC, Cass County, MICH.

Prices Reduced.

Owing to a decline in the price of Beeswax there will, hereafter, be a reduction of **5 cents per pound** on all orders for Comb Foundation.

ALFRED H. NEWMAN,

WHOLESALE AND RETAIL DEALER IN

BEE-KEEPERS' SUPPLIES,

INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,

Honey and Wax Extractors, Comb Foundation, Kegs and Pails for Honey, Seeds for Honey Plants, etc.,

923 WEST MADISON STREET,

CHICAGO, ILLINOIS.

Illustrated Catalogue sent free upon application.

I pay **25c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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65 *ENGRAVINGS*

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BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

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A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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Pure Italian Bees and Queens

For further information, send for Circular.

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AGENTS wanted for The Lives of all the Presidents of the U. S. The largest, handsomest, best book ever sold for less than twice our price. The fastest selling book in America. Immense profits to agents. All intelligent people want it. Any one can become a successful agent. Terms free. HALLETT BOOK CO., Portland, Me. 4A1y

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

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3 Months FREE

We will mail **THE RURAL HOME** for three months ON TRIAL, to any address on receipt of only **10 cents** to help pay postage, packing, etc. Or for 30 cts., silver or stamps, we will mail **THE RURAL HOME** for one year. To any person sending us a club of four 30 cts. subscriptions we will send a sample of silver-plated ware premiums, choice of Sugar Shell, Salt Spoon, Mustard Spoon, Butter Knife, Solid Gold Propelling Pencil, Gold Thimble, etc. Or we will send, for four 30 cts. subscriptions, a copy of any of the Poets in 12mo. volumes illustrated, and handsomely bound in cloth, fifty authors to choose from, including Burns, Milton, Shelley, Shakespeare, Pope, Tennyson, etc. Or to the ladies, we will give a copy of the "Ladies' Manual of Fancy Work," an illustrated guide to all kinds of needle work, containing over 400 illustrations. The above goods are *warranted first-class*, and if not satisfactory we will refund money. Address,

THE RURAL HOME, Philadelphia, Pa.
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DOGS Do you want to buy a Fine-Bred DOG, of any kind? If so, write and name the kind you want.

Edmund Maurer, 1026 Spring Garden St.
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Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
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For Bees, Queens,

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

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1ABly Lock box 995. Belleville, St. Clair Co., Ills.

OLDEST BEE PAPER IN AMERICA

THE WEEKLY

ESTABLISHED IN 1861

BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. } Chicago, Ill., October 29, 1884. VOL. XX.—No. 44.

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **50 cents.**

Entered at the P.O. as Second-Class matter.

TO CORRESPONDENTS.

The Subscription Price of the Weekly BEE JOURNAL is **$2.00** a year; and of the Monthly, **50 cents** a year in advance. New Subscriptions can begin at any time.

Club Rates for the Weekly are: $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

Club Rates for the Monthly are: two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70: five copies for $2.00; more than five copies for 40 cents each.

Sending Money.—Remit by Express, Post Office Order, Postal Note, or Bank Draft on New York or Chicago. If neither of these can be obtained, Register your Letter, affixing stamps both for postage and registry, and take a receipt for it; or send it by Express. Money, sent as above described, is AT OUR RISK, otherwise, it is not. Do not send checks on local banks, which cost us 25 cents each, at the banks here, to get them cashed.

Silver should never be sent in Letters. It will either be stolen, or lost by wearing holes in the envelope.

Postage Stamps of any denomination may be sent for fractions of a dollar: or where Money Orders, cannot be obtained, stamps for any amount may be sent.

Subscription Credits.—The receipt for money sent us will be given on the address-label of every paper. If not given in two weeks after sending the money, write to us, for something must be wrong about it. Do not wait for months or years, and then claim a mistake. The subscription is paid to the END OF THE MONTH indicated on the wrapper-label. This gives a continual statement of account.

Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Topics Presented in this Number.

A Poor Season.................. 700
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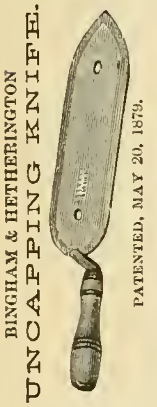
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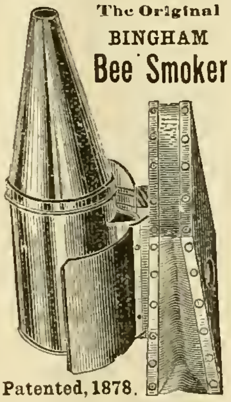

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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., OCTOBER 29, 1884. No. 44.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

☞ At the late Northwestern Bee-Keepers' Convention in this city, it was voted that a committee should be appointed to endeavor to secure by legislation accurate crop reports of bees and honey in the different States of the Northwest; and also to present to the several legislatures the draft of a law concerning the bee-disease called "Foul Brood." The following were duly appointed as such committee:

Thos. G. Newman, Chicago, Ill.
T. L. Von Dorn, Omaha, Neb.
Prof. A. J. Cook, Agricultural Coll., Mich.
Chas. H. Green, Berlin, Wis.
O. Clute, Iowa City, Iowa.
A. Fahnestock, La Porte, Ind.
C. F. Greening, Grand Meadow, Minn.
Dr. G. L. Tinker, New Philadelphia, O.
D. G. Parker, St. Joseph, Mo.
Jas. A. Nelson. Wyandotte, Kans.

Of course the committee will commence its labors at once, and whenever there is anything to report it will be given to the bee-keeping public. The work laid out is important, and it will require much persistent labor to accomplish even a small part of it. Had we been present when the names of the committee were announced, we should have declined the honor, on account of indisposition, and the present multitudinous duties.

Honey Exhibit at Lennox, Ont.

The Napanee *Beaver* thus notices Mr. Allen Pringle's exhibit of bees, honey, wax, and apiarian implements at the Lennox, Ont., exhibition:

> Mr. Allen Pringle made an exhibit of articles required by the apiarist, among which was the double-walled hive for wintering bees. It is arranged so as to secure perfect ventilation, and at the same time being filled in with sawdust, keeps the bees warm. He also showed an improved honey extractor and a summer hive. In the palace Mr. Pringle exhibited a pyramid of honey in comb and extracted. His comb honey was taken from both the brood-chamber and the top of the hive. A more complete or finer display of honey has never been made in this county.

◆

☞ Mr. Joseph M. Wismer, of Jordan Station, Ont., has sent us a copy of the *Canadian Horticulturist*, containing a lithograph likeness of Mr. Wm. Saunders, President of the "Canadian Fruit-Growers' Association," a gentleman of broad views and indomitable energy. Having the confidence of the fruit growers of Canada, he is enabled to accomplish much for the pursuit. That is the secret of success. Jealous opposition to a standard-bearer always retards progress, and damages the interests of all. The *Horticulturist* says:

> In 1880 the Government of Ontario oppointed a special commission to inquire into the progress and condition of agriculture in the Province. Mr. Saunders was appointed one of the commissioners, and was charged with the special duty of inquiring into the subjects of fruit growing and forestry, insects and insectivorous birds, and bee-keeping. The results, mainly of his work, are embodied in a volume of over 350 pages, which was published by the Ontario Government as one of the series of reports presented by the commission.

Feeding Bees for Winter Stores.

The *Bee-Keepers' Guide* gives its method as follows:

> It is the opinion of many experienced bee-keepers that there will be heavy losses sustained this winter, and the predictions, no doubt, will be realized; yet there is no necessity of such a calamity. If each colony is weighed and fed sugar syrup until it reaches the standard weight, there will be no need of anxiety. If the strength of the colony is impaired, extra protection may be necessary. Some apprehend difficulty from unhealthy stores gathered from the maples, and commonly known as honey-dew—a secretion of the maple bark-louse which has been so numerous this year. Consideration of how to overcome this difficulty has resulted in an attempt to contrive means of removing honey of this character from the combs. We think it would be a very difficult task even if we were able to distinguish the good from the unwholesome stores. The most desirable colonies to winter are those which lack about 10 pounds of enough for winter stores, then by supplying the deficiency with sugar syrup, fed as late as October, the bees will store it within and around the cluster. We would certainly adopt this plan if our hives contained what we should consider unhealthful stores. With this management the bees will consume the healthful stores during the severe weather, or during the time of their confinement, thus leaving their own stores for brood-rearing purposes in early spring.

Selling Honey at Home, etc.

In the Texas *Farm and Ranch* we find the following items of interest to bee-keepers:

> I do not believe it pays to ship honey in the barrel to commission merchants, and if a man tries he can sell his honey at home when put up in little cans and labeled. Besides, the label is an advertisement, and if the honey is good, it is an advertisement that is noted.
>
> In selling honey, reputation for a good article establishes your trade. A good name is your fortune. Never try to be smart and get ahead of your customer. This is being dime wise and dollar foolish. If you please a customer, you make one; if you "beat" him you lose one.
>
> The best honey weather is when it is warm and moist, when the air is full of electricity and a storm approaching.
>
> Now it is being proposed that instead of the National Convention of Bee-Keepers being held at the New Orleans Exposition, that an international convention and exhibition be held there. We think the latter proposition the better one, although it is to be feared it is a little late in the day to begin. However, if it is taken hold of at once, promptly and with a will, it may be done yet. Anyway, "better late than never"—although we prefer "better never late."

◆

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Phenol and Foul Brood.

On page 698 Mr. Kohnke has made some criticisms on the use of phenol for curing foul brood, as suggested in a late number of the BEE JOURNAL. Criticisms are always in order on every subject, if conducted in a friendly spirit. On the discovery of the method, which Mr. K. notices, the *British Bee Journal* remarks as follows:

> Mr. Cheshire, in his paper read before the bee-keepers at the International Exhibition, gracefully expresses his indebtedness to Mr. Robert Sproule for suggesting to him the use of phenol as a probably successful means for the cure of foul brood. Mr. Sproule, in a communication which appears on page 284 of the present issue, says "that whatever credit there is for the suggestion of carbolic acid as a cure for the disease is due to Prof. Tichborne, of the Apothecaries' Hall, Dublin, with whom he had a conversation in October, 1881, on the subject." As the order of the day appears to be, "*Suum cuique tribuito*," we may be permitted to trace the suggestion of carbolic or phenic acid back to the year 1876. In that year there appeared in the columns of the *Bee Journal* (vol. iv. page 113) a letter from Captain Danyell, author of *The Italian* [Giotto's] *System of Bee-Keeping*, in which he details with considerable minuteness the mode adopted by Signor Brassi and Dr. Dubini, two advanced Italian bee-masters, for the cure of foul brood; and mentions among other curative means the use of "phenic or carbolic acid." This letter is referred to by the then editor of the *Bee Journal*, in a subsequent number, as a letter which may be read "with much advantage."
>
> In a communication recently received from Mr. Cowan, he says, "With regard to Mr. Cheshire's treatment of foul brood, I think he has overlooked the fact that it has already been recommended by Vogel and Gravenhorst; and in 1877 Dr. Cech published a book called *Phenol, Thymol und Salicylsaure, als Heilmittel der Brutpest der Bienen*. For various reasons it has not been popular; but you will find in last number of the *Alsace-Lorraine Bee Journal* an article on the cure of foul brood with phenol according to Gravenhorst's method, by F. Vierling, who also calls it 'Bacillus' of foul brood."

Mr. John M. Hooker, another English apiarist, comments upon the above item as follows:

> If, indeed, Mr. Cheshire did not in the first place suggest phenol either as a preventive or cure for *foul brood*, there can be no doubt that he first fully saw the enormous value which this substance, when properly used, would prove to bee-keepers. Had, indeed, the other gentlemen been fully aware of its value, do you not think we should have heard more about it?
>
> Signor Grassi, I see from Captain Danyell's letter, does mention *acido phenico:* but the considerable *minuteness* of detail in his description to which you refer, is *wholly* devoted to the use of salicylic acid. Moreover, phenol is suggested here only for washing purposes; and then as second to salicylic acid, which the writer says it may replace on account of its being cheaper.
>
> Phenol has, however, been shown by Mr. Cheshire to be immensely superior to salicylic acid; and here we have experimental corroboration of an inference to be made by any one well acquainted with the general properties of phenol and salicylic acid.
>
> The thanks of all bee-keepers are due to Mr. Cheshire, not only for his very able, interesting, exhaustive, and original researches upon the true nature of the disease, but also for the cure he has placed in their hands; and here I refer more especially to those formulæ which he has published. In less scientific, careful, and experienced hands than those of Mr. Cheshire, phenol would have been immediately discarded, owing to the difficulties and want of success which must necessarily attend first experiments in a case of this kind; but with a knowledge of the benefits derived from its use in other cases of germ disease, and with the perseverance which characterizes the truly scientific man, Mr. Cheshire has successfully carried on and completed his work, and has thus rendered powerless one of the worst enemies the bee-keeper has as yet had to contend with.

In our next issue we will give a subsequent article on this subject from Mr. Cheshire, which will explain some points, and add further details of his experiments.

Honey at the Indiana State Fair.

The Indiana *Farmer* describes as follows the honey display at the Indiana State Fair:

> The display of honey and things pertaining to the bee-keeping interest at the State Fair, was the best that has ever been made at any of our Fairs, and was very creditable to those who took part in the undertaking; much more so than might have been the case in former years, on account of the present poor season, requiring a very great amount of care and work to put things in a creditable condition. Mrs. C. Robbins, President of the State Bee-Keepers' Society, and the Treasurer, Mrs. L. Stout, have been untiring in their efforts to induce bee-keepers to show what an advancement had been made in the business, within the last few years. Mrs. Cox and Mrs. Lane, of Boone county, were both contributors and took part in entertaining friends. Mrs. Robbins, Mrs. Stout, and Mrs. Cox each made a display of honey-producing plants, the two former being very fine indeed, including, as they did, almost the entire list of the honey-producing plants of this State, and we think, if the truth were known, it would appear that the committee had to resort to straws to decide which was entitled to the "red ribbon," the long straw falling to Mrs. Stout.
>
> Mr. S. H. Lane, of Whitestown, Ind., was awarded the first premium on extracted honey in the most marketable shape; also on comb honey, and for the best display of honey, Mr. Cox receiving the second premium on the latter. Both gentlemen exhibited a show-case filled with one-pound sections; one side of Mr. Cox's case being filled with sections heart-shaped and diamond. They also showed honey in many sizes and kinds of retail packages. A globe, jar and cross in the collection of Mr. Lane, attracted much attention.
>
> The greatest attraction to the uninitiated was the word "HONEY" in letters of comb honey, as made by the bees, directly in the sections; the spaces forming the letters being filled by the bees with comb, afterwards the outside blocks being removed leaving the letters standing in bold relief. All of which was performed under the careful hand of Wm. Hutchinson, whose apiary is near Acton, Marion county.
>
> Taking the honey display as a whole, it was creditable to our State Society, to which all the exhibitors belong, and we are well satisfied that it has done much good, not only among bee-keepers, but in the way of educating the people as to what we as bee-keepers are enabled to offer them in the way of an enticing luxury for the table.

Seasonable Hints.

The *American Agriculturist* for November contains these seasonable hints to bee-keepers:

> Small fruits and flies are now gone, the cooler weather excites the appetites for sweets, and if your comb honey crop is not sold, now is the time to dispose of it. The local market should be looked after first, and no honey sent to the distant markets until the local demand is supplied. If there is no local market, make one; if you have never tried, you will be astonished at what can be accomplished by a little push. Honey should not be "kept over" in hopes of receiving better prices, as old honey is not preferred to that which is new.
>
> Contract the entrances to the hives so that mice cannot enter. If the bees, which are to be wintered out of doors, have received no protection, furnish it at once. Have everything in readiness if they are to be wintered in a cellar or a "clamp." When it is evident that the bees have enjoyed their last autumn flight, carefully carry them in.

☞ The "Autumn Leaves" which will bring the most returns are, no doubt, the Leaflets—"Why Eat Honey?" Scatter them and see the effect in selling honey in every neighborhood, at good prices. Two hundred will be sent postpaid for $1.00; 500 for $2.25; 1,000 for $4.00.

CORRESPONDENCE

For the American Bee Journal.

Ventilating Bee-Hives.

H. W. S. ♀

The subject of ventilation of bee-hives is often mentioned in the BEE JOURNAL, and yet I do not remember that any writer has ever said anything as to how much ventilation should be provided for, or in what direction, whether through, around the mass of bees, or whether occasionally or at all times. Once in awhile upper or lower ventilation is spoken of, but nothing of what is meant by either. The subject seems to be very carelessly thought of, and, I suppose, often very carelessly practiced, when practiced at all. Now, I wish to "ventilate" my thoughts on the subject.

When bees are hibernating (by which I mean, passing the winter in close quarters, generally in a quiet and sometimes dormant state), they throw off a great deal of vapor, which, in a state of nature, generally in a hollow tree, passes into and is absorbed by the rotten wood, and there retained until used up by the living tree, or evaporated by the heat of the succeeding summer. Bee-keepers often neglect to make any provision for imitating this natural process, consequently the vapor condenses and runs down the sides of the hive, as water, sometimes freezing up the entrances, and always incommoding the bees, thus making the combs damp and moldy, and otherwise causing injury.

To remove this accumulating vapor, in any manner imitating the natural way, seems to me to be very desirable, and to do so, many plans are used, which plans are generally called "ventilation." But here comes one of the difficulties. Some seem to think that a strong breeze should blow through the hives, and thus, I think, many weak colonies are actually killed, although a very strong colony with ample supply of honey can stand almost any amount of ventilation. In practice, it seems to me that a very slow ventilation is what is wanted, and *all* that is wanted, any other than a slow one being injurious. This is often accomplished by filling the second story with chaff, or any loose material which will allow the vapor-laden air to slowly pass through, or will retain it and hold it as water until spring comes, when it can be dried out for use again during the next winter.

There are many inconveniences about this plan which I avoid by the plan I use, and which I have practiced for several years, having learned it from Mr. Joseph Savage, of Ludlow, Ky., opposite Cincinnati. I make a frame of thin lumber, say half or three-quarters of an inch, of the same size as the second story of a Langstroth hive, but only 6 inches high. On the bottom, or a little way up from the bottom (varying, as I use them on the lower or second story of a hive), I use coarse, strong muslin. This receptacle I fill with layers of cotton-batting. I use one and a half pounds in each, but that is, perhaps, more than is necessary. Mr. Savage makes them only four inches high, and uses less cotton. Before putting these over the colonies, I put a couple of small strips across the frames, and above them a cover of muslin.

The sticks keep the muslin slightly raised in the middle, so that the bees can pass over the tops of the frames, from one frame to another, without being chilled in very cold weather, the top of the hive being the warmest place. Whatever vapor is produced by the bees, rises and passes through the muslin cover, and the muslin bottom of the top-box and passes into the cotton-batting, rising as long as it is in the state of vapor. If it condenses, it is held as water.

In putting on the wooden cover or roof, I leave one end raised about 2 or 3 inches, which allows any wind to pass through, over the cotton-batting, taking up any vapor which may happen to be there; and I find that when thus arranged, the cotton is always dry; but if the cover is put down close, the cotton is often wet, and thus partially hinders the passage of the vapor. The muslin and the cotton-batting seems to allow just about rapid-enough ventilation. If it were more rapid, it would not only take off the vapor, but also the heat; and if it did not freeze the bees, it might make them uncomfortably cool, and thus cause a greater consumption of honey.

The muslin and cotton-batting resemble the bed-clothes upon a sleeping person. The bed-clothes allow the moisture to pass through sufficiently, but retain the heat. You will see that this arrangement resembles very much the plan of filling a top-box with chaff, and perhaps, so far, is no better; but it is much handier.

Whenever you wish to look at your bees in winter, you can lift off the top-box without the least danger or hesitation, and then you have only the muslin cover, of which you can turn up one corner or more, dependent upon the activity of the bees, or other circumstances; whereas, if you have a box filled with chaff, perhaps with a loose bottom, you very likely have to operate 15 or 30 minutes before you can see the bees. I have found this plan very successful, and so has Mr. Savage.

I have several times noticed the mention of the use of enameled cloth over the bees in winter. It appears to me that the use of such material, directly hinders the desired effect, as it is impervious to air or vapor. On page, 663, Mr. C. W. Dayton relates his experience in using enameled cloth, and shows how the vapor condensed on the under side of the cloth, which he got rid of by turning back part of it, thus opening a passage upward; and in another case by perforating it, and thus allowing the moisture to pass through. The whole secret, in my opinion, is to cause a slow, upward passage of the vapor, by the use of a porous cover. Then a roof must be used to shed the rain, but it must be open at the sides to allow the wind to blow the vapor away. By raising it at one end it makes a greater slope to carry the rain off.

I put my ventilators on the hive as soon as cold weather approaches, say in the latter part of September, and leave them on until May or June, and I do not think that it would do any harm, but possibly would be best, to leave them on through the summer. They are excellent equalizers of heat, keeping it in in winter, and I think that they would also act to keep it out during the summer; but I have never tried them in the summer.

Cincinnati, O.

For the American Bee Journal.

Utah Bee-Keepers' Convention.

The Bee-Keepers' Convention met at 7 p. m., at the City Hall in Tooele, on Oct. 6, 1884. Mr. A. M. Musser called the meeting to order.

Tooele City was represented by Mr. T. W. Lee, of Tooele county. There are thirty bee-keepers in Tooele City. Last fall they put into winter quarters, 214 colonies of bees, and during the winter their losses were 38, and their increase was only 15; hence a decrease of 23. They have taken 851 pounds of honey this season. Mr. T. W. Lee has 60 of the above colonies, and has taken 240 pounds of honey. In the spring their bees did very well, and their prospects were rather flattering, but the caterpillars and worms damaged vegetation and deprived the bees of good pasture, hence their report would not be as favorable as last year. There was no foul brood in the county, and the bees are now in a good condition. Bees gathered honey fast, although many colonies had to be fed in the spring and summer. Honey was selling for 20 cents per pound and in good demand.

John Morgan, of Mill Creek, took care of two colonies of bees, and increased them to six, besides taking considerable honey. He was beginning to enlarge his stock of bees, but his ill-health had kept him from paying attention to his apiary. Although the smelters, he thought, were a detriment to bee-culture, yet he thought it was not that alone which had caused so much loss, as the two colonies being increased to six was a proof to the contrary. He further said, that we must keep up the bee and honey interest, for the Territory could not afford to go back on so profitable an industry.

Alvin Stewart, of Mesa, Maricopa county, Arizona, reported that their new settlement had sent to California and imported 25 colonies of bees. Daniel Bagley took 7 colonies and increased them to 27. He also told of a neighbor who took 2 colonies and now has six. Bloom was very abundant and the season long, so much so that he cut his lucern five times.

George Baily of Mill Creek, had taken about 2,500 pounds of honey, and had kept his bees in two divisions, one part of them at his home in Mill Creek, the other, up on the bench, about 150 colonies; he had been too busy to give his bees full attention, or the results would have been better.

Wm. M. Egan, of this city, began last spring with 19 colonies and now has 25, and has taken 1,500 pounds of honey. He considers this season a very poor one for bees and honey; for wintering he approves of Hill's device, as an opening on top of the frames with chaff protection proves a success with him. When necessary in early spring he gives them smut dust, placing it outside where they can work on it for pollen; he thinks that it is far better than flour, and when they are scarce of honey, he gives them a frame of comb honey.

T. B. Clark, of Davis county, said that in Farmington there are about 150 colonies of bees. They averaged 50 pounds of honey per colony. He was pleased to say that the foul brood which had infected their bees so lamentably is fast disappearing. Protect the bees and spare the toads. In France, gardeners often bought toads to devour the vermin in the gardens.

G. W. Bean, of Sevier county, says that the bees have done poorly this season.

In St. George, John Campbell said that the bees did well in the spring, but protracted rains followed by drouth disappointed the bees, and the keepers, too, early in the spring. Some colonies cast 3 swarms. There are about 400 colonies in the place.

Samuel Nowel, of this city, had 2 colonies in the spring, has six now, and has taken 200 pounds of honey.

E. Stevenson, of this city, has 45 colonies on cottonwood. He has been absent one year and considers the season a very poor one. His bees have produced 1,500 pounds of honey in 2-pound sections.

J. E. Murphy, of Mill Creek, has 66 colonies, 36 of them being on Mill Creek bench. He has taken 2,500 lbs. of honey, and about 1,000 more of comb honey yet to take.

It was advised by the meeting to extend the organization of bee-keepers' association through the various counties, and it might be expected that Mr. Stevenson would visit the settlements in this interest.

The convention adjourned until next April. E. STEVENSON, *Sec.*
A. M. MUSSER, *Pres.*

For the American Bee Journal.

Sexual Functions of Bees.

WM. MUTH-RASMUSSEN.

Having read Mr. Kohnke's article on this subject, on page 633, I desire to ask him a few questions, and also to add a few comments: First. Does a laying worker ever deposit eggs in drone cells? If so, is there any difference in the size of the drones reared in such cells, from those reared in worker-cells? I do not now remember of ever having noticed this, nor have I seen it mentioned in print. I know that the drones reared from laying workers, are usually a little larger than a worker-bee. Second. Does Mr. Kohnke know whether laying workers, or any workers, are in possession of a seminal sac capable of receiving and retaining the seminal fluid from the drone?

Now, in regard to the fertilization of worker-bees: "The same scientists have also proven by ocular demonstration that freshly-deposited eggs laid by a mated queen in drone-cells, or those laid by a queen not having mated, as also those laid by workers, are devoid of these sperm-filaments." Of what use, then, would fertilization be to a worker-bee, when it cannot lay female eggs, but can produce male eggs without the sperm-filaments, that is, without fertilization? Why cannot a worker-bee produce female eggs? I think, because it cannot become fertilized. And why not? Because the seminal sac has been so stunted with the whole organism of the individual bee, that it is incapable of receiving and retaining the seminal fluid. The writer in *Bienenzeitung*, commenting on Mr. Kromer's discovery, asks: "Had the worker in question a desire to mate? And further on he says: "The observed fact is also proof conclusive, that the stunted or smaller sexual organs of the workers admit of copulation." I admit that this may be so. I believe that young horses, after castration, sometimes show signs of sexual excitement; but the fact of copulation does not prove that fertilization takes place. "What did such eggs hatch? Only male bees, or drones." As drones are produced by queens without fertilization, reasoning from analogy, they should likewise be so produced by laying workers; consequently the mating of a worker-bee with a drone may be only a freak of nature, induced perhaps by higher development and vigor of some individual worker. "Nature does nothing without an object;" but the object is not always accomplished.

Independence, Calif.

For the American Bee Journal.

Tiering-up Sections—Hibernation.

C. THEILMANN.

I commenced the season of 1884 with 110 colonies, which I increased to 190 by natural swarming, on Mr. Heddon's plan of preventing after-swarms, which I found to be the best method of any that I have ever tried. I obtained about 2,000 pounds of comb and 400 pounds of extracted honey.

The forepart of the summer was middling good here for bees, with a good prospect for basswood honey; but as the blossoms began to open, the greater part of them turned black and fell off, so the bees secured but little honey from that source. The hills and valleys were covered with flowers until the latter part of September, when they ceased without being frosted, although the bees got but little fall honey. Red clover, pumpkins, tomatoes, and here and there some wild flowers are in bloom yet; the bees have brought in some pollen every day, for the past 10 days, as the weather has been unusually warm for this time of the year. It has been 15° to 80° in the shade at noon, though the nights have been cold enough for a slight, white frost in places.

In June, when about ⅔ of my colonies had their surplus arrangements about ⅔ filled with honey, and the prospect for more being good, I tried Mr. Heddon's tiering-up plan. All of these colonies were very strong, and they immediately occupied and commenced to work in the empty sections. After they had them partly filled, they did not find honey enough, with all the abundance of flowers, to complete the work which they had begun; the result being that about ⅔ of my surplus honey was not capped over when the season closed. I never had my comb honey in such bad condition since I began to keep bees, and I hope that it never will be repeated. I am sure that I never will have it occur with the tiering-up plan, as I will never again tier-up until the first set of sections is capped over, or the sections sealed. This tiering-up plan beats me in a poor honey season, but I do not think that it has been so with others. It would be all right, if Mr. H. or some one else could foretell the season ahead.

I cannot close without making a few remarks on hibernation. Mr. Clarke writes a great deal about it, and yet does not say anything; that is, he does not tell us how to proceed or to perform with our bees in order to have them hibernate.

All practical and experienced bee-keepers know that bees winter best when they are in a quiet state, but I have never seen or heard of one who knew of a method to get and to keep the bees in that quiet state, or "to hibernate," as Mr. Clarke terms it, during their winter confinement. In all my wintering of bees, I remember of only one winter through which they passed in that dormant state all winter, and until I put them out in April.

In the fall of 1872, I had 24 strong and heavy colonies in Langstroth hives, for which I built a bee-house in a side-hill near the apiary. I banked it up to the shingle roof, except the front which was double-walled and filled with sawdust between. It was frost proof. I made benches all around the inside about one foot from the ground, on which I put the hives, on Nov. 15. I weighed them while taking them in. After I had them all in, I took the caps and honey-boards off of all the hives, which left the frames bare. The entrances were left wide open, and no holes were made in the combs, nor spreading of frames. I shut the door and let them take care of themselves.

During the winter I went into the bee-house two or three times to see the bees, and each time found them as if they were asleep. They came through the winter in the best condition of any bees that I ever wintered. They consumed only from 3 to 7 pounds of honey per colony, for I weighed them again when I put them out on April 15, 1883. No mold or dampness could be seen, the combs were as bright as they were during the summer, the colonies seemed to be stronger than they were in the fall, and not a handful of dead bees could be seen in the bee-house.

The next winter I put them and their increase (74 colonies) into the same bee-house, but I did not take off the honey-boards. During that winter all but 4 became diseased, and by spring died. I could not account for that.

Since then I have never tried to winter my bees as I did the 24 colonies spoken of, but I will try it again with some of my bees during the coming winter.

In my earlier days of bee-keeping, I did not read any bee-periodicals; but since I do read them I see many ways in which bees are wintered. Some of the writers of the BEE JOURNAL must have different bees than mine are, when they can stand 65° to 90° above zero in their winter confinement. Mine do best at 42° above zero; that is, they are the most silent at that point. The farther above or below 42°, the stronger the noise becomes in the bee-house. This has been my experience for the past ten years.

Theilmanton, Minn.

For the American Bee Journal.

Bees and Flower Petals.

CLARENCE M. WEED. ♀

Eminent botanists believe that many ages ago there were none of the large-petaled, parti-colored flowers that now give such touches of grace and beauty to our landscapes. Then flowers consisted only of the essential pistils and stamens, as is the case of the inconspicuous blossoms of our hickory, oak, and other trees of the present day. These flowers must have been almost wholly wind-fertilized, but with the introduction of insects, and especially the bees and wasps, it became desirable for some species to be fertilized by other means than the very wasteful process of wind-fertilization. The way in which the showy parts were evolved is supposed by our greatest botanists to have been somewhat as follows:

Every gardener is familiar with the fact that plants, under certain conditions, will vary, or sport as it is called, from the one which produced the seed from which it sprung. This often occurs, not only in our cultivated plants, but also in many of our wild flowers. It is by some such process as this that the first petals are supposed to have been developed. Some of the outer stamens on a primitive flower became flattened, thus making the blossom more attractive than its less-favored, non-sportive neighbors. As it was more conspicuous, it would be more freely visited by bees and other insects, and, hence, would be more certain of fertilization by pollen from another plant; because of which, as was so clearly proved by the illustrious Darwin, the seeds produced by the flower would be better developed and produce stronger plants than the others. These plants would, in turn, produce flowers having similar peculiarly-developed stamens, which would again be more freely visited by insects, and consequently develop thriftier seeds. And so the process would go on until a row of the insect-attracting petals would be developed, as in the case of our apples, pears, and the great majority of our common flowering plants.

While writing, I have before me one of our beautiful white water-lilies which admirably illustrates the evolution of petals. Toward the centre of the flower are a large number of the yellow stamens with the pollen-bearing anthers upon their summits. A little farther out, some of these stamens have become flat, with the anthers only partially developed, while still farther out are stamens wholly flattened and with no trace of anthers, only differing from the petals by their smaller size and yellow color. Here we have, as Grant Allen, the English naturalist, expresses it, "stereotyped as it were, the mode of evolution of petals from stamens."

Michigan Agricultural College.

For the American Bee Journal.

Wabash Co., Ind., Convention.

The Wabash County Bee-Keepers' Association met in the Court House at Wabash, Ind., on Oct. 4, 1884. The meeting was called to order at 11 a. m., by President Singer. As there were only a few of the members present, the reading of the minutes was deferred until the afternoon session. The programme of questions was next read by the Secretary. The first question taken up for discussion was, "Does bee-keeping as a business pay?"

Mr. Singer said that his bees netted him over $2 per colony, the present poor season, and he thought that in a good season bee-keeping would pay well. Mr. Cripe said that he realized $8 for comb honey from his best colony, without any feeding or special care. Mr. Coffman thought that this was the poorest season since he began to keep bees, which has been over 40 years. All agreed with Mr. Coffman that this had been a very poor season. The most of the members were of the opinion that, in a good season, bee-keeping pays well, compared with other pursuits.

"Does it pay to use comb foundation? If so, at what price?"

Mr. Singer said that if a colony of bees was provided with foundation, it would give all its energies to gathering honey, instead of building comb. Consequently the bees would enter the sections sooner. Mr. Hess said that when a swarm issued it was prepared to build comb; but had not enough wax secreted to fill an ordinary hive with the necessary combs. He says that all swarms should be provided with some foundation. Mr. Singer said that when bees were secreting wax, they would cluster in large bunches, and if a swarm was hived on full sheets of foundation, it would break the cluster, and would immediately stop secreting wax. The majority of the members agreed that foundation was profitable even at $1 per pound. For sections, flat-bottom foundation was preferred.

"Which is preferable, natural swarming, or increasing by divison?"

Mr. Cripe had had some experience in dividing colonies, but preferred natural swarming. Mr. Singer had increased his number of colonies by division, and prefers the method when working for increase only. It was decided that natural swarming is the best way, if producing comb honey.

"Will bees swarm when they have plenty of room in the hive?"

Mr. Cripe said that if plenty of room were given them early in the season, they would not be so likely to swarm. Mr. Hess said that bees were not likely to swarm when in large hives, as he formerly used very large hives and had had no swarms. Adjourned to 1 p. m.

At the afternoon session the minutes of the previous meeting were read and adopted. The discussion began with the following question: "How shall we prepare bees for winter?"

Mr. Whitlow described his method of packing them in sawdust, about 4 inches deep all around the hive, and a chaff cushion on top, and had lost only one colony in 4 years. Mr. Singer crowds his bees to one side of the hive, by means of a division-board, and packs chaff in behind them. He puts his hives in a row and boards up at their sides and backs, and fills in with chaff or fine straw, leaving the front open. So far he had lost none by this method. Mr. Gray objected to the use of fodder for a protection, as he had used that last winter, and had much bother with mice getting into the fodder, and also into the hives. Mr. Maures packs his bees in chaff, being something similar to Mr. Singer's plan, with the exception that he packs in front of the hives also. Mr. Coffman winters his bees without much protection, except chaff cushions on top.

The feeding of bees was next discussed. Mr. Coffman feeds his bees in the open air, late in the evening, and says that they take the feed up so quickly that his neighbors' bees have no chance to rob. When he prepares his bees for winter, he takes frames of honey from his best colonies and gives them to the weaker ones, thus giving all plenty to winter on. Mr. Fulton feeds his bees inside the hive, and prepares the food by taking coffee A sugar, dissolving it in water, as much as the water will dissolve; he then puts it in glass cans or bottles and sets it in the sun until it is quite warm, after which it is ready for use. Mr. Hess prepares his feed in a similar manner, except that he uses granulated sugar. Nearly all of those present favored inside feeding, and thought it much the safer plan, on account of the danger from robbing, and no strange bees would be fed in that way. Mr. Singer feeds his bees in the morning, in order to give them something to do during the day, so as to keep them away from the cider mill, as they will carry home great quantities of cider if left without any thing else to work on.

Mr. Singer read an essay on "Feeding Bees."

It was decided that the Secretary should make out a programme for the next meeting, and have it published in all the county papers at least four weeks before the time of meeting, in order to gain a large attendance. The next meeting will be held on the second Saturday in April, 1885.

HENRY CRIPE, *Sec.*
AARON SINGER, *Pres.*

For the American Bee Journal.

My Report for 1884.

EUGENE SECOR.

"How doth the little busy bee
Delight to buzz and bite;
To gather honey all the day,
And eat it up at night!"

I do not know who is the author of these lines, but whether it is Cowper or William Nye, they express the disappointment, if not the disgust, of some of the bee-keepers of this year.

It is, perhaps, just as well that bee-keeping is not all sunshine and flowers, else the business would soon be overdone. If every novice embarking in the business could, without any experimental preparation, achieve just as good results as the older members of the fraternity, and if there were no drawbacks, such as bad seasons, wintering troubles, swarming frenzy, etc., honey would soon be so cheap that the poetry of bee-keeping would soon degenerate into the dullest prose, with about nine-tenths of the persons now engaged in it.

To preface my honey report this year, I shall say that the weather was against me. But to lay all the blame at the door of the clerk of atmospheric conditions, is a little more than even my elastic conscience will approve of; for, to tell the whole truth, my bees were not always attended to precisely at the time when I knew they needed attention. Other, and as I thought more profitable business, claimed my time, and only the spare hours were given to the "little helpers."

Spring opened auspiciously. From early in April, when snow disappeared, there was hardly a frosty night. The genial sunshine and bursting buds made glad the heart of every lover of Nature; the flowers sprang up to kiss and welcome the fair maiden, and the "busy bee" sang its delight by a constant hum of busy contentment. The prairie anemones shot out of the recently snow-covered ground; the willows came on apace; the fruit blossoms filled the air with their fragrance; dandelions in profusion invited to the feast, and the fields of white clover seemed to consummate the climax of hope in the enthusiastic apiarist. Thus matters ran along in the poetical groove for a month or two, when it was discovered that the season was not yielding its promised fruition. While we got some white clover honey, we received none from sumac, which is one of our best honey plants, and basswood yielded but little. Then came a drouth for a month or so during July and August, from which the fall flowers never fully recovered; and our fall crop, which is usually our most certain one, was hardly up to the average.

I began the season with 23 colonies, nearly half of them being very weak. I set apart 11 of them to run for extracted honey exclusively, and the others were run for comb honey. Of extracted honey I obtained 770 pounds, being an average of 70 pounds per colony. The largest yield from one colony was 144 pounds. No increase was obtained from them. I secured 501 pounds of comb honey in ¾, 1¼ and 1½-pound sections—an average of only 42 pounds per colony, and increased them by 9 natural swarms. The largest yield of comb honey from one colony and its increase was 70 pounds, spring count.

While our season's work has not been as satisfactory as we desired, yet we have something with which to sweeten our pancakes the coming winter. Honey retails, in our local markets, at 20 cents per pound for nice comb, and 10 to 12 cents for extracted. I should have no difficulty in selling twice what I produce, right here in our local market. No one that I have inquired of has done as well as I this season. There is not enough honey in this part of Iowa to supply the home demand.

Forest City, Iowa.

For the American Bee Journal.

Filling and Capping of Honey-Cells.

DR. D. C. SPENCER.

How does the bee deposit the honey in the cell and manage it while so doing, is a question that has doubtless puzzled naturalists in all ages; and its answer has been hidden, hitherto, among the secret mysteries of this wonderful insect; at least so far as the knowledge of the writer extends.

Having seen in the current volume of the BEE JOURNAL, an answer given by one of the "oracles," that the honey was held in position by force of capillary attraction; and having seen no exception taken, nor objection presented to that answer, I concluded that that was the limit of present knowledge in this direction, and so I put forth the "what and the how" of that wonderful *modus operandi*, as I have seen it; thus endeavoring to add another laurel to the reputation of these marvellous little architects.

This very interesting discovery came to the knowledge of the writer in this wise: In the summer of 1880, during a sudden flow of nectar, the bees in his observatory hive built a piece of comb as a "wing," or an "L" extending from the side of an outer comb to the glass. As the new comb was extended to the glass, it was so arranged by the builders as to have the glass form one side of the last cell, thus affording a rare opportunity for the observer to watch the interesting process of constructing and filling of the cells.

When the construction of the walls had so far progressed that the cell was nearly ready to receive the honey, it was prepared in this manner: A bee was seen to approach the further end of the cell and eject from its mouth a clear liquid which it spread with its mandibles over its concave surface. This process was repeated several times, and forming, when dry, a thin, transparent, varnish-like coating or lining to the end of the cell. This done, the cell was ready for the reception of its treasures. Soon a loaded bee was observed to enter, and proceeding to the lower edge of the lining just finished, began to peal it up until it was detached a little, then it ejected its load beneath and behind the lining, and then replaced the lower edge of the portion that had been pealed up, and patted it down nicely, leaving a slightly convex appearance resembling a blister filled with one solitary load of nectar.

This process was repeated rapidly until this lining was seen to be detached entirely, except at its edges, where it still adhered to the sides of the cell, forming a complete diaphragm, securely confining the honey and holding it in its perpendicular position, and being forced along the walls of the cell until it was filled, usually leaving a space between it and the capping. It seemed to acquire additional strength with age, resisting considerable force before it gives way.

When viewed edgewise, this diaphragm may be distinctly seen with the naked eye, its thickness being judged to be about one one-hundredth part of an inch. Its color, when thus seen, is of an amber hue. By means of a hypodermic syringe this cell wall may be pierced behind the diaphragm, and the honey withdrawn, leaving it intact. Thus fully demonstrating its existence, and the "what and the how" of one of the many interesting processes of these wonderful God-given servants—"our pets."

Augusta, Wis.

For the American Bee Journal.

Western Bee-Keepers' Convention.

The third annual meeting of the Western Bee-Keepers' Association was held at Independence, Mo., on Sept. 24, 1884. There was an exceptionally large exhibition of bees, hives, and products of the apiary.

The business session was short on the first day. At 4 p. m. the Secretary, C. M. Crandall, called the meeting to order, and Jas. D. Meador was called to the chair. The following committee was appointed to solicit members: Jas. D. Meador, L. W. Baldwin, and Jas. A. Jones.

After the preliminary exercises, the subject of "Introducing Queens" was fully discussed.

The Thursday morning session was held from 10 a. m. to 4 p. m. Officers were elected for the ensuing year, and a number of new members were received, some of them being ladies. The meeting decided to hold its semi-annual meeting next spring, at St. Joseph, Mo. It was left to the executive committee to choose the time and place for the next annual meeting.

The minutes of the Wednesday afternoon session were read and approved, immediately after which the report of the committee on subjects for discussion was received, and was as follows: 1. "Is it profitable to extract honey for the purpose of finishing up partly filled sections?" 2. "Is it profitable to rear queens after the honey season fails?" 3. "Is it advisable to manage an apiary so as to get a larger part of the honey gathered as surplus, for feed in winter?" 4. "Taking all things into consideration, what time of the year is the best for Italianizing an apiary?" 5. "Which is the best method for rearing queens?" 6. "Is the extra prolificness of the queen an advantage to herself and colony?"

The report was adopted, and the first proposition of the report was taken up for discussion. Mr. A. A. Baldwin regarded the plan as profitable, from his own experience, and had fed extracted honey with favorable results. Mr. Conser reported his experience as having met with contrary results, and would not advise the feeding of extracted honey. Mr. W. B. Thorne gave his experience as being, that his bees had a tendency to swarm as soon as he began to feed them.

The second question was then discussed. Mr. E. M. Hayhurst regarded it profitable, as did also Mr. Jas. A. Nelson. Mr. A. A. Baldwin expressed the opinion that queens reared at such a time were not as good as they otherwise would be.

Upon the third proposition, Mr. Armstrong expressed himself as favoring the plan. He had done so, using A sugar with good results. Mr. P. B. Thaxton stated that from his limited experience he had formed the opinion that bees always wintered best on honey. Mr. Jas. A. Jones was of the opinion that either honey or sugar could be used for wintering, and that he would take all the honey possible, as could be sold at a price exceeding the cost of sugar. Mr. W. B. Thorne stated, rather to the amusement of the Association, that he would feed his bees on sweet cider, this fall, and report the result at the next meeting. Mr. A. A. Baldwin stated that his plan was to manage so that his bees would store all their honey in sections, and then feed them white sugar for winter food; that at the present price of extracted honey, the feeding of sugar was advisable.

The fourth subject was taken up in the regular order, and, as had the other question, it met with general discussion.

Upon the fifth question Mr. E. M. Hayhurst expressed the opinion that if an apiarist buys his queens, the fall is the best time; but in case an apiarist rears his own queens, the best time is when the honey-flow ceases. Mr. F. G. Hopkins' opinion was, that the best time was when it best suited the apiarist. Mr. Phidel Baldwin regarded the best time to be during the flow of honey, at which time the bees were less inclined to rob. Mr. E. Armstrong regarded the best time for the apiarist, as well as for the bees, as being as early in the season as possible. Mr. L. W. Baldwin considered the best time during the flow of honey, and regarded queens reared at other times as inferior to those reared during the flow of honey. Mr. J. D. Meador regards the time as the best during the swarming season.

BEES AND HONEY FOR 1884,

Names and Addresses.	COLONIES.		Honey Crop—lbs.		Bees-wax.
	May.	Oct.	Comb.	Extract'd	
E. Armstrong, Jerseyville, Ill.	40	90	1000	1000	50
W. B. Thorne, Glenn, Kas.	17	21	150	1165	65
J. F. Baird, Blue Springs, Mo.	70	120	1000		40
P. B. Thaxton, Independence, Mo.	17	39	200	700	
F. G. Hopkins, St. Joseph, Mo.	9	19	450		
John Conser, Glenn, Kas.	46	59	533	884	22
F. O. Shepherd, Arrow Rock, Mo.	120	190	300	4000	150
J. George, Independence, Mo.	52	81	1500		10
A. A. Baldwin, Independence, Mo.	78	118	3200	100	
F. J. Farr, Buckner, Mo.	120	160	1800	400	
Ulysses Adams, Missouri City, Mo.	4	13	300		
L. W. Baldwin, Independence, Mo.	140	185	5650	1000	
John Long, Independence, Mo.	8	22	175	300	10
Jas. A. Nelson, Wyandott, Mo.	57	60	300	1200	10
P. Baldwin, Independence, Mo.	118	160	4300	900	40
Jas. H. Jones, Buckner, Mo.	102	160	6000	500	100
J. W. Wiley, Lawrence, Kas.	32	52	300		10
C. M. Crandall, Independence, Mo.	73	109	2730	100	
C. R. Ormsby, Independence, Mo.	15	26	590	20	
Moses Rowe, Grain Valley, Mo.	36	80		2640	
H. D. Sibley, Independence, Mo.	6	12			
Elias Ellis, Independence, Mo.	15	18	350	40	
J. H. Fink, Independence, Mo.	22	36	650		
Totals	1,197	1,830	31,478	14,949	507

The afternoon session was called to order, and the question which had occupied the time just previous to the noon hour was taken up.

Mr. Conser considers the height of the honey-flow as the best time for Italianizing, and that queens can be reared cheaper at that time. Mr. D. G. Parker concurred in the same opinion.

The following officers were elected for the ensuing year: President, Mr. A. A. Baldwin, Independence, Mo.; Vice-President, Mr. E. Armstrong, Jerseyville, Ill.; Secretary, Mr. C. M. Crandall, Independence, Mo.; Treasurer, Mr. Phidel Baldwin, Independence, Mo.

Immediately upon the election of Mr. Baldwin, as President, he was escorted to the chair, and made some remarks.

Under the head of miscellaneous business, Mr. P. Baldwin was appointed a committee of one on statistics, to report on the following day.

After some further discussion the session adjourned until 7:30 p. m.

The evening session was occupied in discussion. The committee on subjects for discussion made report of the following additional subjects, viz: 7. "What is the best practical method of controlling swarming?" 8. "Is pollen in the hive detrimental to successful wintering?" 9. "Which is the most profitable production, comb or extracted honey?" 10. "Does the bee-keeper or the hive, practically, have the most to do in securing the largest amount of honey?" 11. "Are vicious bees better honey-gatherers than gentle bees of the same race?" 12. "Will it pay to plant for honey only?" 13. "What is the best remedy for bee-fever?"

The discussion of the evening began upon the sixth subject.

Mr. A. A. Baldwin said that he preferred a queen that would just keep up the colony. Mr. E. Armstrong said that the present year had been an exceptional season for bees to breed, and asked for information as to how such could be prevented.

Mr. J. D. Meador said that he thought that it was due to the extra amount of pollen. The most of the members concurred in the opinion that it had been an unusual season for breeding; and further, that bees had bred later than usual. A vote being taken to decide whether, in the opinion of the Association, it was the queen or bees that caused an excessive production of brood, it was decided that it was due to the bees.

Mr. L. W. Baldwin said that while his bees were at work on the Spanish-needle, they would return to the apiary and fly around as if lost, and then alight on the brush and die. His colonies were very much weakened by death in this way.

The seventh question was discussed.

Mr. P. Baldwin said that he had been trying to control swarming, for many years, and in his experience, what would work successfully one year would fail the next. He had tried caging the queens, and they would swarm on the next day, over the caged queen, and so on for several days.

Mr. L. W. Baldwin expressed the opinion that it was best not to attempt to control swarming, but to know what to do with swarms. His method, during the past season was, as soon as a swarm issued, to take the old queen, and in three days destroy all the queen-cells but one, and give a ripe queen-cell. The method had worked to his satisfaction. Mr. C. M. Crandall had successfully operated the same plan.

As to the eighth question discussed, the following resolution was introduced:

Resolved, That the pollen is not detrimental to successful wintering.

Upon the tenth question the Association almost unanimously agreed that the secret lay in the management of the bees, and consequently to the apiarist was due the amount of honey.

The Association was called to order at 10 a. m., on Sept. 26, by President A. A. Baldwin. Under the head of miscellaneous business, Mr. F. G. Hopkins was appointed as a committee to arrange for the spring meeting, which will be held at St. Joseph. Mo.

The discussion was again resumed, by taking up the eleventh question. The discussion became general, and the general opinion expressed was that the vicious bees were not the best honey gatherers.

"Are bees more inclined to sting a dark complexioned than a light complexioned person?" was the next subject for discussion, and upon it the Association generally agreed that they were. With the discussion of this question the morning session closed.

Upon convening in the afternoon, the various committees of judges busied themselves in awarding nearly $200 in premiums, which were announced immediately after the Association was called to order at 4 p. m.

After the awards, the convention received the reports of the different committees, and then adjourned.

C. M. Crandall, *Sec.*
A. A. Baldwin, *Pres.*

For the American Bee Journal.

The Use of Phenol on Foul Brood.

A. R. KOHNKE. 6

On page 644 is an article on the above subject by Mr. F. Cheshire. I am not enough of a microscopist to know whether or not Mr. Cheshire is right in his classification of micro-organisms; in fact, these nice distinctions may well be left to the expert in scientific microscopy, without affecting the main question of prevention and cure. But to certain claims and statements of Mr. C. I must take exception. I will first take into consideration the means of the propagation of the disease.

Mr. C. speaks of "spores which fly about in the air and settle here and there." Well, if that is the case, and most likely it is, the air in a hive containing a diseased colony must certainly be full of them, and permeate every nook and corner, settling also on the cappings of sealed honey, and on the surface of honey not sealed; this, Mr. C. thinks, is very rarely the case. It is not only equally probable but certain, that the spores are carried from one hive to another, not only by the winds and feet and antennæ of the bees, but also the honey-robbing bees carry them from the diseased colony to healthy ones. If it were a fact that no spores settled in the honey, as Mr. C. says that he never found any, why would it be so very absurd to feed such honey to healthy colonies, as Mr. C. also claims? These statements and claims are not consistent with sound reasoning. Mr. C. again says, "The disease lies wholly and absolutely in the blood," but he denies that the food given to the larvæ is the transmitting agent of the spores. May I be pardoned for asking the question, how they got inside the larvæ and into the blood?

Again, whether or not the seed-germs of the disease are called micrococci, or simply spores, does not make so much difference, but they *do* pervade the dried larvæ, and *are* the means of transmitting the disease. Mr. C. lays great stress on the "antennæ" of the bees as being the chief means of carrying the spores from one place to another; those spores which he says, "fly about in the air." If that be true, it would be equally as reasonable as to suppose that men may carry more dust on their noses than on the rest of their bodies. Whether or not bees carry the spores on their toes or on their noses, from one hive to another, has, perhaps, not yet been discovered, and is not of so much consequence as to know that everything coming in contact with an infected hive or colony will transmit the disease. And now to his method of cure.

As a remedial agent, he mentions salicylic acid, and raises three points of objection to its use: "First, it is troublesome in application, on account of having to spray the infected combs and then feed the bees with medicated syrup." But I notice that in treating the colony which was furnished him for a test, he sprayed, too, and the feeding was done by filling the cells of the combs in the diseased colony with his medicated syrup out of a bottle with a very small opening. If no spraying is done, how can the spores in contaminated combs be destroyed, unless the combs are entirely removed, which is certainly the best plan? His method of feeding is certainly much more troublesome and tedious than to feed salicylic acid in syrup from any common feeder, out of which the bees will not take his remedy; unless it is poured upon their backs and forced down their throats, so to speak, they will not accept it.

2. He says, "The question of dose has never been worked out." Mr. C. is evidently not well versed in apicultural literature. The doses, as given in my little pamphlet on foul brood, are as exact and definite as are required for the administration of the most virulent poison. They were published in Germany as early as 1877.

3. "It has," Mr. C. says, "from a mistaken idea of its insolubility, been associated with borax. It adds to the complexity and nauseousness of the remedy." Just so; but why should bee-keepers adhere to this mistaken idea, when by using the remedy as used by its discoverer, one has a certain specific—a specific which in solution is entirely inodorous and readily taken by the bees.

To cap the climax, Mr. C. claims to have discovered in phenol a remedy to cure foul brood. One might be led to think that no means of communication existed between England and the rest of the world. I will give here a translated extract from a little book by Prof. Cech, published in 1877, pages 13, 14 and 15: "To disinfect infected apiaries with phenol proved entirely useless. Bee-hives were washed with a diluted solution of phenol, at least once a month, and all decayed brood was removed. But even if all the combs were removed, and the bees put into new hives, the brood reared afterwards died, all the same. It was impossible to disinfect hives or stay the progress of the terrible disease by the use of phenol, as proven by the treatment of a number of colonies. The experiment to also disinfect the bees, combs and decayed brood, failed entirely. The bees are so aversive to the odor of phenol that they leave the hive within half an hour after its introduction, sometimes even within a few minutes. If they were confined for several hours, they would leave as soon as released. However, it seems that not all colonies are alike sensitive to the odor of phenol; although this drug, as a remedy in the hands of the unexperienced, is not to be recommended. It must be admitted, that according to the experiments of Prof. Butterow, of St. Petersburg (*Bienenzeitung* 1874 to 1876), the bees may be induced to take syrup medicated with phenol without any apparent injury, but 1-600 is the maximum dose they are able to stand. In a report sent to me by Mr. Koscec, administrator in Maximir, it is stated, that in his apiary from May 1 to Sept. 1, 1875, 40 colonies succumbed to the disease in spite of being treated with phenol in every possible manner." That is nine and ten years ago; how does Mr. C. come to claim priority of discovery? Has he remained in ignorance of these experiments all this time.

Phenol has been tried and found—wanting. Salicylic acid is not a poison, at least not any more so than vinegar; but phenol is a corosive poison, having a very penetrating, disagreeable odor. I will quote two more of Mr. C.'s assertions: "This notion about infected hives is largely a delusion," but still, "boiling would not kill the spores." That is confusion worse confounded!

Youngstown, Ohio.

[Some of Mr. Kohnke's criticisms are as unjust as they are severe, as will be seen by referring to an editorial on the same subject on page 692 of this week's paper.—Ed.]

For the American Bee Journal.

Does Honey Agree with Everybody?

WM. F. CLARKE.

The above question rather than "Is Honey Poisonous?" is the one Mr. A. Osborn should have placed at the head of his article on page 613 of the BEE JOURNAL. This is the question he really discusses, and the only one on which there is room for discussion, it having been settled long ago by the best authorities that honey is a most wholesome article of food for the generality of people. But it is an old and true proverb that "what is one man's meat, is another man's poison."

Mr. Osborn, in the article now referred to, while virtually admitting the principle embodied in the proverb just quoted, asserts that pure honey will not disagree with any human stomach. He claims that whenever a person finds that eating honey induces "cramping or colicky pains," the reason is that the bees have been disturbed a great deal, and have dropped poison from their stings on the comb, which has dried there, and inoculated the honey with an injurious quality. Mr. Osborn advises all thus affected to eat pure extracted honey.

He appears to be ignorant of the fact that there are those who have tried again and again only to find that the purest of honey does not agree with them. I am one of that number, and regretfully own that I am obliged to forego the luxury of eating this luscious sweet, precisely as dyspeptics are compelled to deny themselves the use of many articles of food supposed to be wholesome for the million. I am not a dyspeptic, my digestion is good, and there are few articles of food fit for human use that disagree with me, but honey, unfortunately, is one of them.

Mr. Osborn virtually takes the ground that poison agrees with most people; for, while well aware that the majority can eat comb honey with impunity, he ascribes the inability of some to use it without painful results, to a peculiarity of their stomachs. No doubt some human stomachs are tougher, and can withstand poison better than others, but Mr. Osborn's explanation, while applicable to an article of food, is hardly admissible to an article, more or less poisonous, as he asserts comb honey to be.

But I take issue with Mr. O. in regard to his assertion that bees bedaub comb honey with more or less of poison dribbling from their sting ends. If this is so, alas for the producers of comb honey! Mr. O. affirms that "all who eat comb honey, eat more or less of bee-poison." I do not believe this. I venture boldly to deny it, and throw down the gauntlet to Mr. Osborn, on behalf alike of producers and consumers of comb honey. Let us have the proof of this damaging assertion, if there be any. Without the most convincing proof, a bee-keeper should certainly abstain from asserting that all comb honey is besmeared with poison, and calculated to injure all except those whose stomachs are of the strongest. Bees do not squirt their virus like skunks, but first provide for its reception in a living body by puncturing a cell or receptacle for it. If the poison drop were not conveyed by a hollow tube at the rear of the sting with unfailing accuracy, bees would be less formidable antagonists than they are. A little poison spray on the surface of the person would be a very trivial affair. I am confident that Mr. O. is both wrong as to what he reports as a fact, and the inference he draws from it, and if so, he ought to be set right, in order that the interests of bee-keeping may not suffer from his mistakes.

Speedside, Ont.

For the American Bee Journal.

The Results of the Present Year.

JAMES HEDDON.

To illustrate the extreme sensitiveness of flowers, and how they will first withhold their nectar upon the slightest neglect by the weather, I desire to call attention to the fact that we have correct reports of average yields within 25 to 40 miles from where they have almost total failures under equally good management. How uncertain is our business! I have not received over one-fourth of an average yield. I think that basswood, our greatest of all yielders of nectar, gave us, for the first time since I have been in the business, not an ounce of surplus.

I have to report the smallest honey crop and increase in my experience, except my first year, when much of the failure was the result of my mistakes in management. In round numbers I began with 400 colonies (in two apiaries), and closed the season with only 460, and about 6,000 pounds of comb and 1,000 pounds of extracted honey. Extreme cold and drought were the cause. With the usual heat and moisture, our fall crop alone (which was a total failure) would have reached beyond the above figures.

As usual we have been making many experiments on quite an extended scale, and as these experiments were placed entirely in the hands of my foreman and class of student-apprentices, I herewith quote their decisions which are unanimous:

SEPARATORS.—We recommend the use of separators to those who cannot get nice, straight, cratable combs without them.

COMB FOUNDATION.—After several careful trials we prefer the Given foundation for use both in the brood-chamber and surplus boxes.

HIVES.—We prefer a light, small, readily-movable hive.

SURPLUSAGE.—Have it always exclusively on top, and manipulated upon the tiering-up plan.

HONEY-BOARDS.—After careful experimenting, we are positive that the skeleton-sink honey-board used with slats and double spaces, has no tendency to retard the immediate entrance of the bees to the sections as soon as the honey begins to flow, and we deem it an indispensable convenience and comfort.

QUEEN-EXCLUDING HONEY-BOARD.—We see no need of them when running for comb honey, but for extracted honey we are not yet ready to decide.

ONE-HALF POUND SECTIONS.—We get just as many pounds of honey stored in that size as in any other receptacle, in the same length of time.

OLD VS. NEW FOUNDATION.—We prefer the new.

RACE OF BEES.—Germans for comb honey, and Italians for extracted honey. For general purposes, for most localities, we favor the cross between the brown-German and leather-colored Italian, and we find them good-natured. (I will here say that these two races and their crosses are all we have used, and nearly all the German colonies had a little Italian blood in them.)

SWARMING.—We prefer natural swarming to increase by division, and can get as much or more surplus honey with as without any increase.

REVERSIBLE FRAMES.—We favor their use.

WIRED FRAMES.—We prefer them whether used with full sheets of foundation or the merest comb-guides.

DEPTH OF HIVE.—While we do not advise any change from the standard Langstroth frame, if such a change were made, we would favor a shallower frame.

The above is the unanimous decision of my class of 1884—who were selected from many times the number of applicants.

Dowagiac, Mich.

Indiana Farmer.

Bees in the Fall and Winter.

F. L. DOUGHERTY.

The drouth of the present fall has been severe and wide-spread, and will leave many colonies of bees in bad condition, and unless they are given assistance, the disasters of the coming winter will be equally as far-reaching in their fatality. Many colonies may be saved with very little feeding. Others may pass the winter safely by putting two or three together, giving all the stores to one.

As to what is best to feed, we believe syrup made from good coffee sugar is cheapest and best—best because it contains less impurities, cheapest because it requires less in amount and weight per colony. And though nearly all of our colonies have stores enough to carry them through, we shall equalize the stores and feed each colony one quart of syrup.

The combs contain much of what appears to be unripe honey from pomace, spoiled fruit or plant-lice, and past experience teaches us this extra food is cheapest and best. Feeding should be done inside the hives. We not unfrequently simply drop the rear end of our hives the lowest and pour the feed directly in the hive. Before frost breaks the propolis the hives are generally sufficiently tight to hold the syrup.

Indianapolis, Ind.

SELECTIONS FROM OUR LETTER BOX

The Honey Harvest in Scotland.

The honey-gathering season has now closed. All colonies which have been at the Heather-hills have now been brought home, and their stores of honey have been found very greatly to exceed any gatherings for many years past. This, coupled with a heavy return from colonies that had fed upon clover, well repays apiarists for their trouble. Independent of a heavy yield to the apiarist, a goodly store of honey is left as winter food for the bees, which are now nearly all covered up for the winter. I hope that you have been as successful as we. JNO. D. HUTCHISON. ♀

Glasgow, Scotland.

Croton.

I send you a specimen of a plant which we call wild sage. Will you please inform us whether we are correct or not? for many of the readers of the BEE JOURNAL are anxious about this plant. Do you think that it produces any honey? Bees are not often seen on it. Bees have done very poorly in this section, this season.

E. S. TAYLOR. ⊸

Houston, Tex., Oct. 14, 1884.

[This is *Croton capitatum*, and in common with several others usually called simply *croton*. It cannot be recommended as a honey plant. The plants of the whole family are more or less poisonous, though the nectar may be entirely free from the acrid qualities of the sap. Still the amount of honey produced is small and not likely to be of much value at the best. Croton oil, well known for its severe effects upon the human skin, comes from an allied species.—T. J. BURRILL.]

Good Yield and Large Increase.

From 12 colonies, spring count, I have secured 300 pounds of comb and 325 pounds of extracted honey. The largest yield was 116 pounds from a colony of hybrids. I now have 28 colonies. WALTER WOODRUFF. ⊶

Rockdale, Iowa, Oct. 20, 1884.

Report from the Sweet Home Apiary.

My yield, this year, is from 35 colonies, spring count, and is 3,392 pounds of comb honey in one and two-pound sections, and 600 pounds of extracted honey. My largest yield from one colony was 153 one-pound sections of honey. I sold $70 worth of bees at $5 per colony, and have remaining 56 colonies, all prepared for winter on Oct. 1, with 30 pounds of good ripe honey per colony. JOHN REY. ⊙

East Saginaw, Mich., Oct. 20, 1884.

A Wonderful Yield of Honey.

This has been a busy season for me. I obtained a fraction over 172,000 pounds of honey from 550 colonies, spring count, and increased my apiary to 1,250 colonies. I have just sold my honey at 4 cents per pound. This county (Ventura) has a population of about 7,500. The honey production for the season has been about 9,000 tons. I had 57 swarms, this year, and saved all of them except one.

S. M. W. EASLEY. ♀

Springville, Calif., Oct. 10, 1884.

A Poor Season.

I began the season with 140 colonies in fair condition, and increased them to 156 in good condition for winter. I have taken, in all, 3,125 pounds of comb honey, and 225 pounds of extracted—an average of about 24 pounds per colony, spring count. The season here was a poor one. My bees were in good order for the honey harvest, but it did not come.

J. V. CALDWELL. ⊸

Cambridge, Ill., Oct. 15, 1884.

My Report for the Season.

I think as Mr. Doolittle said, that is, that every bee-keeper in the United States should send in a report, at least once a year, to one of our principal bee-papers. With hopes of seeing some of our brethren fall into line, I here give my report: In January 1884, I had the care of 80 colonies of bees; I did not get a drop of honey until July 7, and none after Aug. 10. One colony produced 500 pounds of honey, while the rest (79) produced only four barrels. How is that for 1884, eh? R. JOHNSON. ♀

Iberville Parish, La.

Convention Notices.

☞ The Southern Illinois Bee-Keepers' Association will meet at Duquoin, in the Opera House on Thursday, Nov. 13, 1884. All are cordially invited. F. H. KENNEDY, *Sec.*

WM. LITTLE, *Pres.*

☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.

W. B. LAWRENCE, *Sec.*

☞ The bee-keepers of McDonough and adjoining counties are requested to meet at Bushnell, Ill., on Nov. 20, 1884, for the purpose of organizing a bee-keepers' association.

J. G. NORTON.

☞ The Iowa Central Bee-Keepers' Association will hold their annual meeting in the Court House at Winterset, Iowa, on Friday, Nov. 7, 1884. All interested in bee-culture are requested to be present.

J. E. PRYOR, *Sec.*

A. J. ADKISON, *Pres.*

☞ The Mahoning Valley Bee-Keepers will hold their fall meeting in Ravenna, O., on Nov. 14, 1884. A cordial invitation is extended to all.

E. W. TURNER, *Sec.*

Newton Falls, O.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Oct. 27, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c. on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX—Is dull at 26@28c on arrival.

C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11½@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—Stocks are large and the demand slow. Qualities other than choice are particularly difficult to move. White to extra white comb, 9@10 c.; dark to good, 6@8 c.; extracted, choice to extra white, 4½@5 c.; dark and candied, 4 cents.

BEESWAX.—Wholesale, 24@27 c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—Our market is at present overstocked with honey, large quantities having been brought in wagons, and every place is filled up. Some lots have sold as low as 9c. for 1-lb. sections of white comb. We have not changed prices, but find sales very slow at 16c. for best white 1-lbs., and 14c. for 2-lbs. Dark honey we are offering as low as 10 to 12c. without being able to effect sales. Extracted is not wanted at all, and no sale at any price.

BEESWAX.—28@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

GEO. W. MEADE & CO., 213 Market.

KANSAS CITY.

HONEY.—The receipts of honey are very large and fine, with a splendid demand, and we are very low in stock of all kinds of comb honey. While the tendency of everything is to lower prices, honey is in active demand, with us, at steady prices. One-half lb. sections, none in the market; one-pounds, 16 cents; two-pounds, 14@15 cents; California 2-lbs., 14@16 cents. Choice California extracted is selling at 7@9 cents per lb.

BEESWAX.—None in the market.

CLEMONS, CLOON & CO.
Successors to Jerome Twichell.

Local Convention Directory.

1884. *Time and place of Meeting.*

Oct. 31.—Northeast Mo., at Hunnewell, Mo.
A. Noland, Sec.

Nov. 7.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Nov. 10.—Will County, Ill., at Beecher, Ill.
Gustavus Kettering, Sec.

Nov. 13.—Southern Illinois, at Duquoin, Ills.
F. H. Kennedy, Sec.

Nov. 14.—Mahoning Valley, O., at Ravenna, O.
E. W. Turner, Sec.

Nov. 25.—Western Michigan, at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

1885.
Jan. 14,—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,

925 West Madison St., CHICAGO, ILL.

Is it Foul Brood?

I send you two samples of comb which I took from a colony of bees in my apiary. I found the same in 4 colonies which were in different parts of the yard with good, strong colonies between them. Will Mr. Heddon please answer, through the Bee Journal, the following questions concerning it:

1. Is it foul brood?
2. If so, will it injure my apiary after giving the bees new hives and new combs from healthy colonies?
3. If it is not foul brood, what is it, and what had I better do with it?
4. Is the white substance in the one piece dry pollen? and will it do any harm in my extracting combs?
5. Do you recommend ground cork for cushions to absorb the moisture of bees in winter?

Chas. W. Vandervoort.

Napanee, Ont., Oct. 17, 1884.

Answers.—1. The two pieces of comb I have examined, and one contains some cells of bee-bread moldy on top; the other, dead, dried-up brood. While I have never had a case of foul brood to look at, I do not hesitate in saying that there is no foul brood about either comb.

2. The method you speak of for saving the bees, would not be safe if it were foul brood.

3. I do not know what caused the moldy bee-bread or dead brood, because I know nothing of the condition of your colonies.

4. The bees will take care of your trouble, and clean up the combs if the colony is strong in numbers.

5. Cork is not an absorbent.

Moving Bees.

I have 7 colonies of bees in good condition in sawdust hives, and all nicely packed for the winter. I expect to move two blocks from my present residence on Nov. 15; would you advise me to move the bees 2 or 3 miles away at once, and return them in the spring to my new residence? or do you think that I can safely take them direct to the new location, two blocks distant, after they have been confined, say 3 or 4 weeks?

F. A. Gemmill.

Orangeville, Ont.

Answer.—I should feel safe in moving them very quietly as soon as they are closed in by winter to stay until spring. When they first fly, lean a board up partially in front of the entrance, and all will mark their new location. Remove from the old location as many old marks as possible.

Selling Glass as Honey.

Will Mr. Heddon please answer the following questions:

1. In glassed sections, does the glass sell as honey? that is, should it be weighed as "net?"
2. If so, would it pay for itself with honey at 15 cents per pound and glass $3 per 50 square feet?
3. What is the outside measure of the half-pound sections?
4. Do bees ever cap cells containing pollen covered with honey?

C. A. Knowlton.⊙

Hope Villa, La.

Answers.—1. With glassed sections the glass is always sold and weighed as so much honey.

2. Yes.

3. Ours are 4¼x2 13-16 with 7 to the foot, with separators, and 8 to the foot without separators.

4. Certainly.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 25
" 200 colonies (420 pages)...... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Trial Subscribers.—The Weekly Bee Journal will be sent to any *new* subscriber in North America from now until the end of 1884 for 25 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

☞ For $2.75 we will supply the Weekly Bee Journal one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly Bee Journal and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly Bee Journal for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly Bee Journal for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly Bee Journal for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

CLUBBING LIST.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00..	
and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)	2 75..	2 50
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	3 50 .	3 25
Dzierzon's New Bee Book (cloth)	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping	3 50..	3 25
Langstroth's Standard Work	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing	3 00..	2 75
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees	2 75..	2 50
King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
British Bee Journal	3 75..	3 50
The 7 above-named papers	8 25 .	7 00

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in the world may hereafter be procured under the above Trade Mark, and we want every Cabb Grower in the Union to test them this season so he will know what to use in future. They are call

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WHY ARE THEY THE BEST IN THE WORLD?

1st. Because we have for years been perfecting the best strains, and seeding from **perfect head**

2d. Because they are grown in the extreme northern part of the Union, on Puget Sound, Washingt Territory, where the **soil** and **climate** are more perfectly adapted to the complete development of Cabbage than any other section of the Union. Not only do **Northern Grown** Cabbage Seeds do bet naturally than those grown farther South, but the more **perfect development** of the **heads** th from which the seeds are grown enables us to more critically select the **true types** which may thus reproduced. **The seeds** also are **much larger and more perfectly developed** and produ **larger and thriftier plants** which better withstand insect ravages than any other seeds in existen

3d. Because they are grown directly under the careful and *personal supervision* of a brother of advertiser, who has our reputation at stake, and will see that they are kept **the best in the worl**

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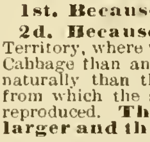
AN AGENT WANTED. We want **one good reliable agent** (only) every town where we have none, (over 500 alrea established,) to sell our superior seeds, and plan grown from them, to his neighbors. **Full instructions** for *successfully* growing and selling plants w be furnished with such favorable rates on seeds that you can **make money rapidly.** If rightly situ ed to act apply at once for full particulars. Depend upon it, *this is a rare chance to establish yourself in remunerative business at your own home.* For reference send for list of agents. Some sold 500 000 plant

CAUTION! The great popularity already attained by **"Tillinghast's Puget Sound Seeds,"** has induced some dealers to offer inferior seeds as nearly under our name as they dare to. Some of the we know have been grown on Puget Sound, but from common mixed stocks by very careless and irresponsib parties, who expect to sell on the strength of the justly earned reputation of our famous brand. **To avo** all such *see that they are sold under our Registered Trade Mark, or send directly to us for them*

Address,— **ISAAC F. TILLINGHAST, LA PLUME, Lack'a Co., Pa.**

SEND FOR IT.

We have just issued a new four-page circular that will interest any bee-keeper. Send your name on a postal card for it.
44Atf HENRY ALLEY, Wenham, Mass.



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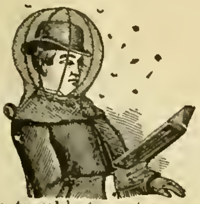
NOW IS THE TIME.

I have less than 60 copies of the Bee-Keepers' Handy-Book. No more will be printed until the type is reset. One of our improved Drone and Queen-Traps and the book bound in cloth will be sent by mail for $1.50
44A2t HENRY ALLEY, Wenham, Mass.



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There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

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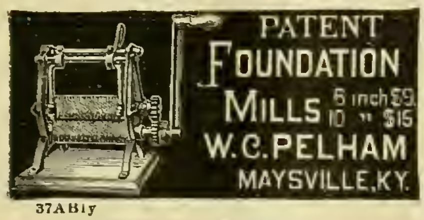

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6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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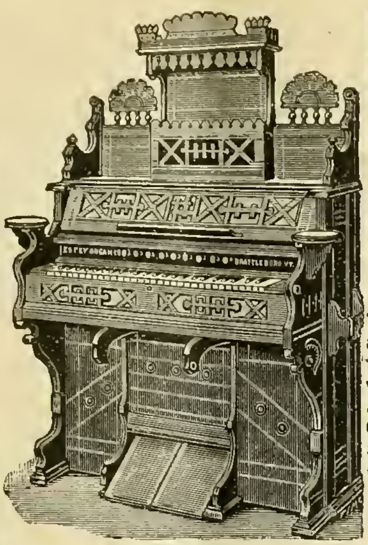

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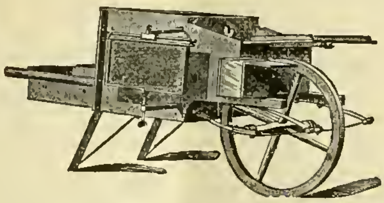

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1868. 1884.

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Why not send me your Wax

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If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

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Either for Comb or Extracted Honey, cheaper than many can procure material at home. Write for special prices in quantity, and state the number wanted.

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For further information, send for Circular.
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Send for Samples & Reduced Price-List.

ABtf J. VANDERVORT, Laceyville, Pa.

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BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., November 5, 1884. VOL. XX.—No. 45.

THE AMERICAN BEE JOURNAL

PUBLISHED BY

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

925 WEST MADISON ST., CHICAGO, ILL.

Weekly, **$2** a year; Monthly, **50 cents.**

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The Subscription Price of the Weekly BEE JOURNAL is **$2.00** a year; and of the Monthly, **50 cents** a year in advance. New Subscriptions can begin at any time.

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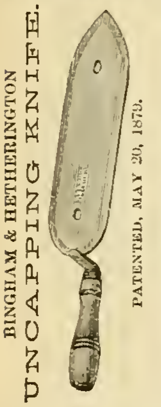
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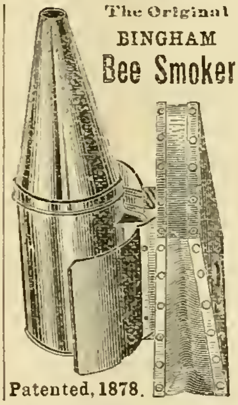

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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., NOVEMBER 5, 1884. No. 45.

THE AMERICAN
BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
Editor and Proprietor.

The National Convention.

As we were unable to be present at the meeting of the North American Bee-Keepers' Society, last week, (not feeling well enough to leave home), we sent a reporter, so as to be able to present our readers with a detailed account of the proceedings, as early as possible. Our reporter wrote us on Oct. 28, as follows:

> Your correspondent and reporter cannot resist the temptation to narrate "the wanderings of a pilgrim" in search of the annual meeting of the North American Bee-Keepers' Society. The last notice that he saw in the Bee Journal, prior to starting for Rochester, closed by saying that particulars as to place of meeting would be given "hereafter". Supposing that the time of assembling would be 10 a. m., he rode on the cars all night, arriving in Rochester at 7 a. m. The morning papers which he got on the train, gave no notice of the hour or the place of meeting. One of them said, "The North American Bee-Keepers' Society will commence its annual meeting in the city to-day."
>
> On reaching the city, he set out in search of the convention, called at several hotels, and at two or three stores where honey was sold, but failed to learn anything more about the meeting. Sallying out after breakfast, he recognized among the pedestrians on the sidewalk, the pale but familiar face of Silas M. Locke, of Salem, Mass., from whom he learned that the City Hall was the place of meeting, 2 p. m., the hour, and the Litster House the Apicultural Head-quarters. Mr. Locke kindly guided him to where Messrs. L. C. Root, W. E. Clarke, F. C. Benedict, and others of the early arrivals could be found, so that he was very soon at home. During the forenoon, Messrs. I. Barber, R. Bacon, F. Bacon, J. Thompson, and perhaps a dozen more turned up at the City Hall, and an hour or two of good fellowship was enjoyed.
>
> Your correspondent blames nobody, but it was unfortunate that the hour and place of meeting were left to be announced "hereafter". The President and Secretary state that notification of time and place was sent to the bee-periodicals, and are at a loss to know why the information was not put before the public. The Editor of the Bee Journal can, no doubt, clear himself from the "soft impeachment" herein implied, and others are hereby invited to "do likewise."

Our correspondent must have been asleep, or dreaming! On page 660 of the Bee Journal for Oct. 15, is an editorial notice stating that the meeting was "to be held at the City Hall, in Rochester, N. Y., commencing at 1 p. m., on Tuesday, Oct. 28, and continuing three days." It is a fact, however, that the Railroad and Hotel arrangements have not been published, and this probably was what *vexed* our correspondent, and made him call for an explanation.

The Bee Journal can very easily clear itself from the slightest blame in this matter. We presume that the cause was a complication of circumstances; unavoidable, perhaps, but none the less perplexing. We do not know why the Committee did not make their arrangements earlier, nor why the notice was not sent direct to the Bee Journal, seeing there was no time to lose in order to give even *one* insertion of such an important matter.

The facts are that the notice was sent to the Secretary, Dr. Miller, of Marengo, Ill., while he was in attendance at the Chicago Convention, and he did not return to his home until the evening of Oct. 20. He wrote the "notice" next morning and we received it on Oct. 22, one day after every number of the last Bee Journal before the meeting, had been sent out to subscribers. Had the notice been sent to the Bee Journal direct, it would have duly appeared.

Accompanying the notice, Dr. Miller wrote us that he feared "it would not be in time." He was not well during the Convention, and for that reason was absent at one session and he did not return to Marengo as soon as the Convention adjourned, but remained at Austin, with his wife, with some friends. On this account he seemed to think it was his fault that the notice could not be published, and he added:

> "Although there is some excuse, it is my fault. I think it may be as well for you to say as much, for it is possible that the Bee Journal may be blamed for the delay."

We think this explanation will wholly clear us of blame in the matter. We regret that the notice was not *in time*, for we have always done all we could to further the interests of the National Society, as our readers must be well aware. We regret this circumstance the more so, because some of the Eastern apiarists have an idea that those in the West are not in accord with them. This idea, however, is unfounded and should be instantly dismissed. The Western apiarists are united and harmonious, and will, if permitted, labor with all others for the best interests of the fraternity in America.

We announce with pleasure the fact that the Continental Convention was well attended, and, so far as heard from, the deliberations were conducted so as to merit universal approbation. For the next place of meeting Detroit was unanimously selected, and from the fact that it is centrally located and easy of access from all sections of the United States as well as Canada, there will doubtless be a large attendance.

We publish as much of the Report in this Journal as we have received, and will give the rest next week.

◆

Trial Subscribers.—The Weekly Bee Journal will be sent to any *new* subscriber in North America from now until the end of 1884 for 25 cents. This offer is intended to aid those who are getting up clubs at Fairs, Conventions, etc., and should add several thousand to our readers during the next month.

Local Convention Directory.

1884. *Time and place of Meeting.*

Nov. 7.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.

Nov. 10.—Will County, Ill., at Beecher, Ill.
Gustavus Kettering, Sec.

Nov. 13.—Southern Illinois, at Duquoin, Ills.
F. H. Kennedy, Sec.

Nov. 14.—Mahoning Valley, O., at Ravenna, O.
E. W. Turner, Sec.

Nov. 25.—Western Michigan, at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

1885.
Jan. 14.—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

North American Bee Convention.

The fifteenth annual session of the North American Bee-Keepers' Society convened at the City Hall in Rochester, N. Y., on Tuesday, Oct. 28, 1884.

At the hour of 2 p. m., upwards of fifty bee-keepers being in attendance, the meeting was called to order by Mr. L. C. Root, of Mohawk, N. Y., First Vice-President, who proceeded to deliver the following

ADDRESS OF WELCOME:

In welcoming the bee-keepers of North America here to-day, I do it with mingled feelings of pleasure and deep regret. I am indeed thankful to the members of this Society who met one year ago at Toronto, for the honor of being chosen Vice-President of this body of bee-keepers. This appreciation is the greater because this position is second only to his whom every progressive bee-keeper delights to honor.

While I am thankful for the good cheer which comes to me through these associations, I most deeply regret that our honored President, the Rev. L. L. Langstroth, cannot be with us and preside over these meetings. I feel that the heart of each one present must beat in sympathy in the sadness which comes to us in the disappointment we feel in not being able to welcome our veteran friend to his appropriate place. I wrote to him, not long since, in the hope of the possibility of his attendance; but while the reply came in his own hand writing, it was as follows:

"Oxford, O., Oct. 6, 1884.—Mr. L. C. Root:—*My Dear Friend*—Many thanks for your very kind letter. My head is some better, but not enough so to allow me to do any work. I suffer so much that I lie down most of the time. Under these circumstances you will see that it is impossible for me to attend the Convention. I can only express my good wishes to those who atttend. With kind regards to yourself and family. Your sincere friend, L. L. Langstroth."

I present you this letter that you all may know the condition of our friend, who for so many years has done so much that we of to-day may conduct our bee-keeping according to more scientific and improved practical methods. Let us not fail to be appreciative of these privileges, and mindful of our aged friend who is worthy of all honor.

Brother bee-keepers, we are here to represent the best interests of the bee-keepers of the United States and Canada. Let us see to it that our discussions are considerate and just to all; that they may tend to better methods which shall raise the standard of bee-keeping to a higher, broader, and more permanent plane than it has ever before occupied.

In behalf of the members of the Northeastern Bee-Keepers' Association who have been working earnestly, many of whom are present, and who are anxious to do all in their power to make this meeting a pleasant and profitable one, I again welcome you all to this beautiful city of our Empire State.

In the absence of Dr. Miller, the Secretary of the Society, and Mr. C. F. Muth, the Treasurer, Mr. C. F. Benedict was appointed Secretary *pro tem*, and Mr. R. Bacon Treasurer, *pro tem*.

The following committee on programme was appointed: J. B. Hall, of Ontario; Ira Barber, W. E. Clark, F. O. Peet, of New York, and Arthur Todd, of Pennsylvania.

A call was made for the minutes of the last meeting, which led to explanations to the effect that no official report had appeared, and that the only one available was the report which was published in the American Bee Journal. It was further stated that a report was in existence in short-hand, made by a phonographer who was engaged by Mr. D. A. Jones, the ex-President, for the sum of $100; but that owing to some misunderstanding, the report had never been completed in long-hand, the reporter considering that he had a claim on the Society for compensation, and the probability was that more would be heard about the matter at a later stage of the meeting.

The President then produced the American Bee Journal's report, and asked if it was the pleasure of the meeting to have that read by the Secretary, as the minutes of the last meeting. No motion being made on the subject, the Secretary proceeded to read the American Bee Journal's editorial summing up of last year's meeting.

A motion was then made to reduce the membership fee of the Society from $1 to 50 cents; but on a question being raised as to the constitutionality of the motion, there being no copy of the Constitution at hand, the matter was laid on the table to be considered later on.

The committee on programme reported recommending the reading of a communication to the Convention, from Mr. Frank Benton, accompanying a sample of his queen shipping-cages, to be followed by a discussion on sending queens by mail. On assent being given to the report, the Secretary read Mr. Benton's essay, after which a number of members spoke on the subject, all expressing their appreciation of Mr. Benton's efforts and success. Among these was Mr. Peet, originator of the queen shipping-cage which bears his name, who spoke highly in praise of Mr. Benton's device. Mr. W. F. Clarke prepared a resolution, which, at his suggestion, was moved by Mr. Peet and seconded by its author. After some highly appreciative remarks by the President and others, the resolution passed unanimosly. The resolution reads as follows:

Resolved, That we have listened with much pleasure to Mr. Benton's essay, and have inspected his sample cage; rejoice in his success in mailing queens to long distances, and we tender him our sincere thanks.

The committee on programme next presented some questions forwarded by mail by A. J. Fisher, of East Liverpool, O. The meeting agreed to take up the questions *seriatim*. The first was: "What is the best and most successful method of preventing first and second swarms?"

The discussion which arose on this question took a wide range, and excited considerable interest; in fact, the meeting began to show signs of warming up to its work.

Mr. J. B. Hall, of Woodstock, Ont., would do all in his power to prevent swarming, but confessed his inability to wholly stop it. His plan was to put on section-cases early in the season, and do all in his power to coax the bees to work in them. Bees were like ladies, they could not be driven, but might be coaxed.

Mr. Wm. F. Clarke, of Ontario, said that the question under consideration seemed to imply that it was desirable to prevent swarming altogether. Is that desirable? Bees in swarming obey a law of nature which commanded them to increase and multiply. Is not a first swarm a sort of necessity? We call it "the swarming fever." That is not a proper term, unless it becomes a disease, or in other words, is carried to excess. Until it is excessive, it is in obedience to an instinct which we should not wish to entirely eradicate.

The President said that he would eradicate it if he could, and makes it a point to prevent natural swarming as much as possible, making his extra colonies by division.

Mr. Clarke raised the question whether bees worked with the same will and enthusiasm when divided as when they swarmed naturally? Several members testified that they did not. The President believed that we should bend nature to our own purposes, and for practical results in running an apiary, dividing judiciously was better than natural swarming.

Ventilation, air, shade, and introducing young queens when surplus honey began to come in, were severally advocated. Finally, the sense of the meeting on the subject was embodied in the following, which was moved by Mr. F. C. Benedict, seconded by Mr. Peet, and unanimously carried:

Resolved, That this Convention can give no fixed rules for the entire prevention of swarming while producing comb honey; but the following methods tend to its prevention: plenty of room, air, shade, and introducing young queens at the beginning of the surplus honey harvest,

Wm. F. Clarke drew the attention of the Convention to the desirableness of some provision for social intercourse among the members of the Society. Some of them were busy reporting, others were occupied with business on committees, or with the introduction and sale of apiarian fixtures, during the intervals between meeings. His namesake, W. E. Clark, said that last year, at Toronto, the sociality was the best part of the meeting. He wanted to get personally acquainted with the bee-keepers, and he thought that that was a general feeling. The President and others followed up the suggestion, and finally it was moved by W. E. Clark, seconded by Wm. F. Clarke, and unanimously

Resolved, That it be an instruction to the committee on programme to arrange for a social time during part of this evening's session.

The Convention then adjourned to meet at 7 p. m.

SECOND SESSION.

The Convention met at 7:30 p. m., First Vice-President, L. C. Root, being in the chair.

The committee on programme reported to resume consideration of the second question transmitted by Mr. A. J. Fisher, viz: "When we as bee-keepers cry down adulteration, are we working to our interests when we use full sheets of foundation in our surplus boxes? especially if we use seven or eight feet to the pound are not we ourselves ruining our markets?"

Mr. Hall, of Ontario, used foundation 7 or 8 feet to the pound, and was never troubled with "fishbone," as it is called. He had tried foundation 10 or 12 feet to the pound, but it was difficult to keep it straight; it would curl. He had used foundation 4 feet to the pound in the brood-chamber, and found that the bees drew it out very thin, so that if you sold a sheet of it to a dealer it cut up into pound and half-pound squares, and gave satisfaction to customers. He had never had any complaint about "fishbone."

Mr. Benedict said that bee-keepers must be careful in using very thin foundation in section-boxes, otherwise the sale of honey would be injured.

Mr. S. T. Pettit, of Ontario, thought that we were starting an unreal difficulty. He heard nothing of "fishbone" in comb honey, except at conventions. He deprecated creating a prejudice when there was no need for it.

Mr. W. E. Clark, of New York, concurred with Mr. Pettit.

Mr. Peet, of New York, narrated a case of objection to comb honey, on the part of a purchaser, because of a hard centre.

Mr. Locke, of Massachusetts, gave an account of comb honey with a centre wall that resembled chewing gum when taken between the teeth.

Mr. Vandervort, of Pennsylvania, was of the opinion that when thin foundation was used, no one could tell the difference between comb honey with and that without foundation. He and four of his neighbors shipped a car load of comb honey to New York, and out of the five lots only one was natural comb. It was the least salable of any of the lots. The four lots with foundation in them were more salable, and brought a better price in the market than the other lot.

Mr. C. C. Van Deusen had tried foundation of various thicknesses, and while some of the thicker samples were characterized by objectionable "fishbone," the thinner ones were free from the objection.

Mr. Vandervort said that when the right foundation was used, even an expert could not tell it from the natural comb. He, himself, had been deceived several times.

President Root thought that much of the objection to foundation in surplus sections arose from its being a novelty and an innovation. He remembered when mowing machines first came around, what opposition there was to them on the part of many farmers. It was so with many things. There was no doubt that in some respects art was an improvement on nature. We certainly get more attractive and marketable honey by the use of comb foundation, and it was in no sense an adulteration, since both natural comb and comb foundation were alike made of beeswax.

It was moved by Mr. Peet, and seconded by Mr. R. Bacon, "That it is the sense of this Convention that it is detrimental to our honey trade to use, in section-boxes, comb foundation less than 10 feet to the pound."

Mr. Hall, of Ontario, could not concur in the resolution, as his experience was against it. He used none lighter than 8 feet to the pound, and he got beautiful comb honey, so nice that Dr. C. C. Miller thought it must have been produced by the use of separators.

Mr. Locke had seen Mr. Hall's honey for two or three seasons, and could testify that it was first-class.

The resolution was put to a rising vote, when a large number voted, many did not vote, and only two rose in opposition. The President, therefore, declared the resolution carried.

A motion was made by W. E. Clark, and seconded by S. T. Pettit, that a committee of five be appointed by the chairman to consider what modifications, if any, should be made in the North American Bee-Keepers' Society.

Mr. Wm. F. Clarke, of Ontario, spoke at some length on this resolution. He said that he was the only member present who was at the organization of the Society, and claimed the indulgence of the meeting in a brief review of its history. It was first intended to call the Society by the name "National," but at his request it was called "North American," so as to include Canada. It was often called the "National Society," but it would be more proper to call it the "Inter-National," for such was its real character, and such he hoped it would continue. At the inception of the Society, there was a ring or clique among bee-keepers, which the organization was the means of breaking up, and he boldly affirmed that there had never been a ring or clique managing the Society. Some appeared to think that the Society had had its day, and that there were those who wished to split it into three fragments, the Northeastern, the Northwestern, and the Southern; personally, he hoped that this would not be done. It was true that the constituency was a vast one, and we usually had a large local attendance with but a small distant representation. But there was a prestige about a Continental body which gave it a good influence, and rendered its meetings important. It was an educating power wherever held. He would deprecate a division of the Society into three, mainly because it would destroy its international character. Canada and the United States had been happily united in this apicultural fellowship, and he hoped that it would continue. He had no doubt that the Society might be modified and improved in various respects, but he would not like to see it broken up.

Mr. Clarke's remarks were well received, and several members expressed concurrence in the opinion that the integrity of the Society should be maintained, and that it should continue to embrace both Canada and the United States. The resolution was unanimously passed, and the President appointed the following committee: Ira Barber, Wm. F. Clarke, W. E. Clark, Arthur Todd, and J. Van Deusen.

The meeting then adjourned, and passed about an hour in free, social converse.

THIRD SESSION.

The Convention came to order at 10 a. m., with President Root in the chair, the attendance being about double that of yesterday. Enrollment of members was the first order of business. It was decided to accept 50 cents as the membership fee for the current year. The following then gave in their names to the Secretary, and paid their dues, with the exception of the ladies, who are admitted free, according to the Constitution of the Society:

Thomas Pierce, Gansevort, N. Y.
S. B. Wheeler, Union City, Pa.
U. E. Dodge, Fredonia, N. Y.
L. C. Root, Mohawk, N. Y.
G. H. Ashby, Albion, N. Y.
W. Bacon, Delta, N. Y.
C. J. Densmore, Livonia Station, N. Y.
E. C. Campbell, Cayuga. Ont.
G. W. Patting, Scipioville, N. Y.
R. Bacon, Verona, N. Y.
O. G. Russell, Albion, N. Y.
M. M. Wright, Castile, N. Y.

J. Van Densen, Spront Brook, N. Y,
Geo. K. Wright, Cambria, N, Y.
W. E. Moulton, Alexander, N. Y.
Miles Morton, Groton, N. Y.
Jesse Mekeel, Poplar Ridge, N. Y.
Arthur Todd, Germantown, Pa.
Geo. M. Lawrenee, Warsaw, N. Y.
Theo. O. Peet, Brooklyn, N, Y.
J. A, Andrews, Philadelphia, Pa.
E. W. Thompson, Hinsdale, N. Y.
Chas. S. Hurlbut, West Bethany, N. Y.
W. L. Coggshall, West Groton, N. Y.
E. W. Landon, Broekton, N. Y.
W. G. Fish, Ithaca, N. Y.
Chas. Faville, South Wales, N. Y.
O. G. Smith, Seneea Falls, N. Y,
O. H. Sage, Churchville, N. Y.
Wm. Bray, Gainesville, N. Y.
Ed. Hutchinson, East Avon, N. Y.
Elias Mott, Norwieh, Ont.
F. C. Burmaster, Irving, N. Y.
Dr. J. P. H. Brown, Augusta, Ga.
L. S. Newman, Peoria, N. Y.
S. M. Puhl, South Toledo, Ohio.
N. N. Betsinger, Mareellus, N. Y.
Ira Barber, De Kalb Junction, N. Y.
S. C. Sleeper, Holland, N. Y.
J. Vandervort, Laceyville, Pa.
C. C. Van Deusen, Sproutbrook, N. Y.
J. L. Schofield, Chenango Bridge, N. Y.
Geo. Wickwire, Weston's Mills, N. Y.
Wm. Ellis, St. David's, Ont.
W. L. Foster, Warner's, N. Y.
S. T. Pettit, Belmont, Ont.
Miss Louisa Pettit, Belmont, Ont.
L. H. Baumister, Roehester, N. Y.
J. B. Hall, Woodstock, Ont.
Mrs. Thos. Whiteneek, Tusearora, N. Y.
Thos. Whiteneck, Tusearora, N. Y.
J. D. Weaver, Penfield, N. Y.
Wm. F. Clarke, Speedside, Ont.
F. C. Benedict, Perry Center, N. Y.
Mrs. F. C. Benediet, Perry Center, N. Y.
W. E. Clark, Oriskany, N. Y.
C: R. Isham, Peoria, N. Y.
G. W. Stanley, Wyoming, N. Y.
J. E. Stanley, Wyoming, N. Y.
S. M. Locke, Salem, Mass.

On recommendation of the Programme Committee, it was agreed to hear the communication on Marketing Honey, etc., forwarded by Mr. T. G. Newman, Editor of the AMERICAN BEE JOURNAL. It was then read by the Secretary as follows:

MARKETING HONEY, ETC.

Mr. President, and Members of the North American Bee-Keepers' Society:

I am requested to send you a short article on the above subject, but I shall not attempt to go over the well-defined and oft-repeated rudimentary rules for the management and preparing honey for the markets of the world. These items have been fully discussed at previous meetings, and I have nothing further to add to the views already expressed. But there is one thing that it will be well to discuss, and not to leave it there, but to appoint a committee whose duty it shall be to address the railroad companies of America and *demand*, in the name of this Society, redress in the matter of the classification of bees and honey.

Hives of bees are classed at double first-class rates, which is very unjust—making the charges equal to those for sending by express. Then, by the mistaken use of the word "hive" for *colony*—empty hives are, by many railroads, classed the same as those containing bees, greatly to the detriment of those who buy hives from manufacturers. They should go as "empty boxes," at about one-eighth of the cost now demanded for freight by some railroads.

In the matter of shipping honey to market—the classification is so high that it amounts to almost a robbery—and to seek relief, some bee-keepers ship extracted honey as "syrup," at less than half the rates demanded for honey. Tariffs ought to be revised, and liquid honey should be rated the same as syrup.

Those bee-keepers who have a desire to be exactly right, and feel delicate about the matter of shipping honey as syrup, are, therefore, compelled to pay double the amount which their less scrupulous neighbors have to pay for freight to the large marts of the world.

Some grades of syrup sell as high as honey, and there is no reason why both should not be graded alike, when one is as easily and cheaply handled as the other.

Regretting my inability to be present, allow me to suggest that you appoint a committee to confer with the different railroad companies, and instruct them to endeavor to get these things adjusted on an equitable and reasonable basis.

Hoping that your Convention will be entirely harmonious and successful, I remain fraternally yours,

THOS. G. NEWMAN.

Mr. Pettit, in commenting upon the communication, urged the importance of taking more trouble to get grocers and others to keep honey for sale, saying that much more honey would be sold annually if people could buy it from the grocers.

Mr. Van Deusen said that the reason why some grocers refuse to handle honey is because of the leakage.

Mr. Pettit stated that in Ontario, honey is put into boxes and glassed on one side, and tissue paper is put on the bottom so as to prevent leaking.

Mr. Dodge related his experience in trying to market both extracted and granulated honey. He believed that the difficulty in disposing of extracted honey is owing to the fact that they do not ask a high enough price for the extracted in comparison with the honey in the comb. The very little higher price charged for extracted honey, over honey in comb, suggests adulteration.

W. E. Clark explained that the local market in Oneida county could have been kept at 20 cents per pound, had not a man, who happened to have a good crop, rushed into the market and was in such a hurry to sell, that he broke the market. He advocated holding on to honey. He advised that holders should not all endeavor to sell under each other, causing a glut and lower prices.

Mr. Betsinger advocated making efforts to secure reduced freight rates, and urged that the local market be watched and not overloaded under any circumstances. It is a fact, he said, that extracted honey must be sold for less than comb honey, because it can be prepared at about half the cost of comb honey. The latter will always be a luxury, and never can a great demand be created for a luxury. He would encourage the use of extracted honey because of the large consumption of honey, especially in the place of other materials; butter, for instance.

Mr. Bacon believed that the trouble in marketing honey is, that people are not properly educated, else they would understand the fact that comb honey costs more than extracted honey, and would not believe that any "hookery" is going on when they buy comb honey at a higher price than extracted honey. Mr. Dodge said that he agreed with Mr. Clark that local markets could be built up to a certain extent, but where a dealer has 8,000 or 10,000 pounds, he must find a market beyond the producers, and he wanted to know how he could get a market for his extracted honey.

Theo. O. Peet said that extracted honey is not as good as comb honey, unless it be extracted after the cells are capped, and then it cannot be extracted at much less expense than comb honey.

Mr. Hall said that there was a deluge of honey during the latter part of June, at which time honey was sold at 10 cents a pound, and finally at 9 cents by J. W. Hall & Co. These men who go wild with their honey, should be treated with contempt, because they cannot be controlled nor educated.

Mr. Will Ellis explained that the great cause in the fall in prices is, that the producers, instead of the consumers, manage to cut prices by competition.

Mr. Vandervort said that he has sustained his severest losses by trying to get more for his honey than it would bring. He has sold his honey for what it would bring, spent his money, gone to work to get another crop, and kept out of the poor-house.

Mr. Bacon said that the market for honey is injured by some slouchy men who send honey into the market in dirty boxes, causing dealers to beat down producers who have nicely prepared honey, to the same prices at which they can furnish the article in the poor and dirty boxes.

Mr. Pierce stated that he had met with just such experience in selling comb honey. He had found that nice honey put in clean boxes would find a good market as soon as the producer's reputation is established.

A question having been handed in by Mr. U. E. Dodge, of Fredonia, N. Y., bearing on the same subject, it was agreed to consider it in connection with Mr. Newman's communication. The question was, "How and when shall we market our extracted honey?" It was moved by Mr. Peet, and seconded by Mr. Hall,

Resolved, That this convention recommend to bee-keepers, the desirableness of taking more care in placing our honey on the market in the most attractive manner, both extracted and comb honey, and attaching their names thereto; and that they discountenance all efforts to beat down the market by slovenly bee-keepers and dealers who adulterate it.

In reference to the railroad rates of freight on honey, brought before the meeting by Mr. Newman, Mr. L. C. Root said that he believed that the point made by Mr. Newman, regarding railroad freights, was well taken, and that a committee be appointed as suggested.

Mr. Bacon moved the appointment of a committee of three to consult with the railroad authorities regarding rates. The motion prevailed, and then it was suggested by Mr. Root that the matter be left to the Vice-Presidents of the Society.

A motion was next made to reconsider the motion previously adopted, which was carried, and the convention voted to adjourn until 1:30 p. m.

At the adjournment of the morning session, the members assembled on the front steps of the City Hall, and the group was photographed.

FOURTH SESSION.

The Convention was called to order at 2 p. m., with the President in the chair. At the suggestion of the programme committee, reports from Vice-Presidents were read as follows: O. O. Poppleton, Iowa; Dr. J. P. H. Brown, Georgia, and W. S. Hart, Florida.

Wm. F. Clarke, of Ontario, was then called upon to read his paper on

WINTERING BEES.

The subject of wintering bees is in a chaotic state. Our best bee-keepers frankly admit that we have no absolutely safe methods of wintering bees. There is no method before the public that has not proved a failure in some seasons and under certain circumstances. All must own that as yet we are only learners on the subject.

While almost every other branch of bee-keeping has made wonderful progress during the last 20 years, wintering has been at a standstill. It seems clear to my mind that all trouble is traceable to the fact that we have overlooked a principle of bee life not wholly unknown to us, but whose vital importance is not sufficiently appreciated. I refer to hibernation. Hibernation is a term often employed in general literature to express simply the idea of passing the winter; but in the world of science it stands for that state of complete or partial torpor into which bees sink at the advent of cold weather. Let me lay down the proposition that bees in a cold climate invariably sink into this torpor; also the proposition that when provided with proper shelter and sufficient food they winter well if they can hibernate.

The hibernation of bees is no new discovery. What I claim, and all that I claim in regard to the hibernation of bees is the discovery that furnishes the key with which to solve the winter problem. Mr. Clarke cited proofs of the two propositions, and continued: At the meeting of the Northwestern Bee-Keepers' Society, held in Chicago two weeks ago, Mr. Heddon said this question of wintering was not one of cellars, ventilation, pieces of wood and laths, quilts and cushions over the combs. What killed our bees was diarrhœa? I take up the question and unhesitatingly say, inability to hibernate. If bees can get into this condition and maintain it while cold weather lasts, they will not have diarrhœa. If they cannot, they will infallibly contract the disease.

I venture to assert that if you will give bees a domicile impervious at the top, having side walls, so that frost will not strike through and condense vapor inside, give them food, and supply a perpendicular air-column beneath, you will solve the winter problem. The great desideratum is pure air and plenty of it in a receptacle not too large for them to regulate the temperature. To warm a receptacle by holes at the top, is as hopeless as it is to attempt to fill a perforated tub with water. Why do the bees propolize holes as big as a pinhole at the top of their hives? Because instinct teaches them to retain all the heat they make. The bees generate their own heat, and if it be wasted, they must consume too much food, and then they become distended with fœces and cannot sink into perfect quiet, which is the normal condition in winter.

Mr. Clarke discussed cellars, clamps and bee-houses, and pointed out the objections to these modes of wintering bees. In speaking of chaff-hives, he said: If these hives were placed two feet from the ground, and an air shaft was put in below, they would meet all conditions for hibernation. Want of air and excess of food cause diarrhœa. If the hives are too warm or too cold the bees eat too much, and the bodies are distended and must have relief. They eat more than they can get rid of in dry powdery excreta, they become diseased and die. When in too cold hives the bees eat large quantities of honey to generate heat, and the same fatal result happens. Bees want in addition to what we give them, pure air; only that and nothing more.

Mr. Clarke described a hive-stand, a model of which he exhibited. It was so constructed as to give the bees a vertical air-shaft under the hive. He requested each bee-keeper present to give his method a trial with at least one colony of bees the coming winter. Concluding, the speaker said of his method: "It involves no moving of hives from summer stands. It saves expense and the trouble connected with cellars, clamps and bee-houses, and it is confidently believed it will prove a remedy for bee-diarrhœa and for spring dwindling. The only objection to the method is that it will so simplify bee-keeping that it will be common and greatly lessen the profits of bee-keepers."

A spirited discussion arose on Mr. Clarke's essay. Mr. Barber gave an account of his wintering bees in a warm cellar, from 48° to 58° above zero.

Mr. Hall corroborated Mr. Barber's statement. He found that his bees were quiet anywhere from 48° to 56° above zero if the temperature were raised gradually; if raised suddenly, they became uneasy. He had but a small per cent. of losses when wintering them in a warm place.

Mr. Clarke stated that no doubt bees could be wintered in a warm place; they were so wintered in the South, but the question was, "What was the normal condition of bees during winter in a cold climate? Also, as to the consumption of honey?" While hibernating, they consumed very little honey; if kept warm, the consumption would be greater. It was a great thing to save even five pounds of honey per colony, and multiplying that by all the colonies kept on this continent, see the immense saving. We were so demoralized about wintering bees that we were glad to get our colonies through alive, though with depleted numbers, exhausted stores, and in poor condition. They might survive, and yet not be well wintered. He had shown that if fixed so as to hibernate, they would winter well in all respects.

Mr. Pettit deprecated the idea going abroad that bees might be wintered on from 2 to 6 pounds of honey.

Mr. Clarke replied that the idea would do no harm if connected with the condition that they hibernated.

Several members expressed interest in the hibernation theory, and a purpose to try the plan during the coming winter.

The President spoke favorably of the essay, and hoped that its positions would be fully and fairly tested.

Mr. Clarke said that if bee-keepers would try the hibernation method during the coming winter, they would be in a position to discuss the matter more intelligently a year hence.

The next place of meeting was then considered, the result being that Detroit, Mich., was chosen by a large majority, and then made the unanimous choice of the Convention.

The election of officers was the next order of business, with the following result:

President.—L. C. Root, Mohawk, N. Y.
First V.-Pr.—H. D. Cutting, Clinton, Mich.
Sec.—W. Z. Hutchinson, Rogersville, Mich.
Treasurer.—C. F. Muth, Cincinnati, Ohio.

VICE-PRESIDENTS.

Vermont—A. E. Manum,
Massachusetts—J. E. Pond, Jr.,
New York—W. E. Clark,
Delaware—W. J. Gibbons,
Virginia—J. W. Porter.
Georgia—Dr. J. P. H. Brown,
Florida—W. S. Hart,
Mississippi—Dr. O. M. Blanton,
Louisiana—Paul L. Viallon,
Texas—W. H. Andrews,
Kentucky—W. C. Pelham,
Tennessee—W. P. Henderson,
Ohio—A. I. Root,
Illinois—Dr. C. C. Miller,
Iowa—O. O. Poppleton,
Missouri—C. M. Crandall,
Wisconsin—George Grimm,
Kansas—Jerome Twichell,
Nebraska—M. L. Trester,
Ontario—S. T. Pettit,
Manitoba—Chief Justice Wallbridge,
Quebec—H. F. Hunt.

It was voted that a committee be appointed by the President to fill vacancies in the list of Vice-Presidents. The following were so nominated: Messrs. Peet, Vandervort, and C. C. Van Deusen.

It was moved by Wm. F. Clarke, seconded by J. B. Hall, and unanimously

Resolved, That the President, First Vice-President, Secretary, Treasurer, Miss Lucy A. Wilkins (Cyula Linswik), of Farwell, Mich., and A. B. Weed, of Detroit, be the executive committee of the Society for the ensuing year.

The subject of reversible frames was mentioned by the President, and

J. Van Deusen asked to open a discussion on it; but it being close on the hour of adjournment, it was deemed best to defer the matter until the evening session.

Proofs of the photograph taken at noon were then produced by the Secretary, and it was announced that copies could be had for $2 each.

The meeting then adjourned.

Iowa Wild Honey.

The Hon. A. R. Fulton, of Des Moines, one of the old-timers in Iowa, and one of the best collators of facts in the history of the State, has an interesting article in the last Annals of Iowa, on the golden days of the bees in that State, from which we condense the following:

There are those who remember that, away back in the "forties," in the States further east, we used to read and hear of "Iowa honey," an article then as highly-prized and as much sought-for as the "California honey" has been with us at a later period. At that time Iowa was literally a land of wild honey; nor has there since been anything in our experience to disprove her right to the claim of being the special habitat of the honey-bee. The great profusion of wild flowers, though they bloomed and blushed unseen by human eye, afforded a delicious pasturage for the myriads of colonies of honey-bees which were snugly housed through the winter months in the trunks of the tall trees of the forests bordering on the water-courses.

During the autumn months a favorite pastime and source of profit among the pioneer adventurers was bee-hunting. By watching a single bee as it took its flight, laden with its rich burden, the experienced bee-hunter could determine with certainty nearly the exact locality of its treasure-house. The bee-hunter had only to take the "course" and follow it in a direct line to the timber. Generally, before penetrating far into the forest, he could observe the converging lines of bees as they returned, laden with the sweets of the prairie, to the common line. Then it was only necessary to keep a sharp lookout for some hollow knot or opening, far up in some tall tree, to discover the depository of of the precious treasure. After a brief search, this was generally discovered, and known to a certainty by the thousands of little workers entering the hive or departing therefrom. Then it was only necessary for the hunter to mark the tree with his initials to insure its safety and protection as his own property, against any and all other claims, until the season arrived for securing the honey. If a "bee-tree" was found to be "marked," it was a rule, invariably observed as a matter of honor, to leave it unmolested.

The timber lands bordering on the Skunk river (by the Indians called the *Che-cau-que*) were especially noted as the paradise of the bee-hunters, and in advance of any permanent settlement of this country, parties of them penetrated that region in quest of honey. Several incidents, the details of which are in the possession of the writer, will serve to show something as to the nature of this primitive, Iowa industry.

In October, 1835, one, John Huff, who subsequently settled in Jefferson county, accompanied by a lad named Levi Johnson, went to the west side of the Skunk river and encamped, a short distance above where the village of Rome, in Henry County, is now situated. At this latter point, at that time, there was a trading-post kept by one, William McPherson, as the Sac and Fox Indians still occupied that region. The purpose of Mr. Huff and his young companion was to spend a month in bee-hunting. They continued to ramble through the heavy timber skirting the river and its tributaries, until the middle of November, when they began preparations for returning to the Mississippi. Huff had collected eighty gallons of honey, and Johnson about forty, which was put into barrels manufactured by themselves at their camp.

The river now beginning to rise a little, they prepared a couple of canoes or "dug-outs," into which they placed their freight, consisting of three barrels of honey, guns, axes and auger, with some other tools and camping utensils; also a small stock of provisions, including five dressed, wild turkeys and some venison. Passengers and freight being aboard, they set out on their voyage for Illinois, being, so far as we know, the first craft manned by white men, that ever navigated the waters of the Skunk river from a point so far up as the place of the embarkation. With the two canoes lashed together, they glided along smoothly until about sundown, when they ran upon a "sawyer," which capsized the canoes, turning the contents into the river, with the exception of one barrel of honey, which, fitting so closely, remained fast in one of the canoes. All the rest of the freight went to the bottom, in twelve feet of water. The canoes were drawn ashore, and the remaining barrel of honey rolled out. In his effort to save the property, Mr. Huff even lost his shoes.

The weather was now becoming quite cold, and the situation was not a pleasant one, but those backwoodsmen of early Iowa were not unaccustomed to hardship. Leaving canoes and honey, Mr. Huff, barefooted, set out for Burlington, where he obtained another pair of shoes, and some grappling hooks to use in searching for the sunken freight. Young Johnson returned to his mother's home in the eastern part of Henry county.

After an absence of about twelve days they returned to the scene of their disaster to seek for the lost treasure. By means of the iron hooks, the two barrels of honey were soon recovered, but the other articles were not so easily found. An Indian who was present, agreed, for one dollar, to dive and get the gun. He went down once, but did not succeed. While he was warming himself for a second trial, Mr. Huff, himself, drew up the gun with the iron hook. The two axes, drawing-knife and auger were found during the next January by cutting a hole in the ice.

Without further disaster, Messrs. Huff and Johnson succeeded in getting their cargo of honey to Carthage, Ill., where they sold it for fifty cents a gallon. During the same season, another party collected, on the east bank of Skunk river and along Big Creek, in Henry county, some fourteen barrels of honey, which they sold in Burlington.

Mr. Huff, himself, declared that, at that early day in Iowa, honey-bees were so plentiful that it was difficult, on a warm day, for a man to keep them from flying into his mouth while eating a piece of honey. In the fall of 1836, he found ten "bee-trees" on a small branch near where Fairfield was subsequently located. He sent the product of this "find" to Carthage, by one, James Lanman, who sold it for $22.75. During the same year a man named Ballard, settled or encamped on the same small stream, and for a time followed the business of bee-hunting. The stream was afterward known as Ballard's Branch. Ballard's camp was about two miles northeast of Fairfield, and his "claim" embraced the fine grove of timber in that vicinity. As soon, however, as the country began to be settled, he found his occupation gone, became discouraged and went west.

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly Bee Journal for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

☞ The Mahoning Valley Bee-Keepers will hold their fall meeting in Ravenna, O., on Nov. 14, 1884. A cordial invitation is extended to all.

E. W. Turner, *Sec.*
Newton Falls, O.

"Walls of Corn" is the title of a neat little pamphlet received from the Department of Immigration of the Atchison, Topeka & Santa Fe R. R., which goes to show that Kansas raises poetry as well as corn, and a high-grade article, too. Mrs. Ellen P. Allerton, a Kansas farmer's wife, wrote a charming little poem entitled "Walls of Corn," which has been handsomely illustrated, with full page colored plates. An appendix of peculiar value to any one desiring information concerning the State, gives the official government figures in a striking comparison of Kansas with other leading agricultural States. Send your name to Mr. C. B. Schmidt, Commissioner of Immigration, A., T. & S. F. R. R., and he will mail a copy FREE to your address.

Stingless Bees of Cuba.

Mr. A. J. King gives the following editorial in the *Bee-Keepers' Magazine*, descriptive of these insects and their habits :

During our stay on the Island of Cuba, we employed much time investigating its honey-flora and the quality of honey produced by each variety.

On one occasion we were examining the flowers of a Royal Palm which, standing at the foot of a rather steep hill and ourself at an elevation, brought the circle of flowers within twenty feet of us, we could, with our powerful field-glass, bring the bees, so to speak, so near that the characteristics of the different kinds were easily discovered. There were wasps, yellow-jackets, bumble-bees and Italians, but what particularly attracted our attention was a little insect, which to our recollection, was exactly like the stingless bees of South America, which we had seen on one or two occasions several years ago, and we at once surmised that they were identical.

After much inquiry we found our surmises correct and that a colony of these delightful insects was in the possession of a native living several miles away in the dense forest, and who was engaged, in a primitive way, in the production of charcoal.

Mr. Pedro Casanova and myself set out on horseback, and arriving at the cabin of the Cuban, just as the sun was going down, discovered the object of our search. The little beauties were located in the section of a hollow log about six inches in diameter and two feet long which was suspended in a horizontal position on the side-wall of the cabin.

A round hole hardly a quarter of an inch in diameter in the center of one end of the log formed the only entrance or exit; the other end was closed with what seemed to be a conglomeration of pollen, wax, resin and some other moist and sticky material.

On looking into the entrance-hole, all we could discover was a little, white, fuzzy head peeking out in a cautious, half-cowardly manner. The last of the foragers were just returning, and it was amusing to see how swiftly, yet surely, they would always dart into the little entrance without once missing or having to crawl in, like our ordinary bees.

In all their movements they are as swift as lightning, and we had great difficulty in catching one, but far more in keeping it.

The other end of this log-hive contained a plug, which was withdrawn and several of the honey-bags having been perforated, a tumbler was soon filled with a very delicious but rather thin honey.

This honey is supposed by the natives to possess medicinal properties and is sold at a high price—something like the "bumble-bee honey" in the city, with the difference that the former is real honey while the latter, so far as the bumble-bee is concerned in its production, is a myth, but in either case the medical superiority over ordinary honey must reside entirely in the faith of the patient.

We purchased this hive and taking it on our shoulder, remounted and carried it safely to the Casanova apiary. Here, we fitted up a nice bamboo log for a hive and undertook to drive out the pets, but we found that they would not "drum for a cent." We then tried smoke, with no better result. Finally we procured a saw and by being very cautious, succeeded in separating the log from end to end. Then taking out the nest, pollen, honey, bees and all, we fitted it into the bamboo, left it for three weeks until the bees had it all fastened in, then brought it to New York; but forgetting to wrap it up one cold night, the little inmates had chilled and died.

Many have been the speculations of the would-be wise in regard to these bees, nearly all of which are mistaken notions. The idea that there is any danger in handling them bare-faced and bare-handed is untrue. They will not mix with any variety of our true honey-bees, and they are unprofitable except as objects of curiosity.

A fair-sized colony is composed of one thousand to fifteen hundred bees, occupying a space of perhaps eighteen inches long and four inches in diameter. About five inches from the entrance to their log-hive are the brood-combs, suspended from the roof in parallel rows of four combs.

The combs are nearly round, not as thick as ordinary brood-comb and not more than three inches in diameter. The sacks containing honey and pollen look very much alike, but do not resemble cells in any sense, being somewhat irregular in shape, an inch long and three-quarters of an inch in diameter, and each holds about two table-spoonfuls of honey. They are of a dark color and lie on top, bottom and sides, packed like so many bags of grain, three-fourths of them being filled with pollen and the balance with honey.

In shape these bees are much like the bumble-bee, and in color like the yellow-jacket, but are not more than one-fifth as large as a bumble-bee, and perhaps its body is longer in proportion than that of its "big cousin." The queen is really beautiful and differs in shape from the workers in the same way that ordinary queens differ; but the bees are much more vigorous and can cling to objects with greater tenacity than any other insect that we have ever seen.

Convention Notices.

☞ The Southern Illinois Bee-Keepers' Association will meet at Duquoin, in the Opera House on Thursday, Nov. 13, 1884. All are cordially invited.
F. H. Kennedy, *Sec.*
Wm. Little, *Pres.*

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☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.
W. B. Lawrence, *Sec.*

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Nov. 5, 1884.

The following are the latest quotations for honey and beeswax received up to this hour :

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c. on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX—Is dull at 26@28c on arrival.

C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-℔, 18@20c., 2-℔, 16@18c.; fair to good, 1 and 2-℔, 14@16c.; fancy buckwheat, 1-℔, 12½@13c., 2-℔, 11½@12c.; ordinary grades of dark, 1 and 2-℔, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY.—Good to choice qualities are selling slowly, mostly in a jobbing way. Inferior grades are neglected. The market is weak at the quotations. A sale of 100 cases extracted, mostly choice white, was made at 4¼c. One hundred tons extracted, barrels and cases, are going aboard ship for Liverpool. White to extra white comb, 9@10c; dark to good, 6@8c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 24@27c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY.—The receipts of honey are very large and fine, with a splendid demand, and we are very low in stock of all kinds of comb honey. While the tendency of everything is to lower prices, honey is in active demand, with us, at steady prices. One-half lb. sections, none in the market; one-pounds, 16 cents; two-pounds, 14@15 cents; California 2-lbs., 14@16 cents. Choice California extracted is selling at 7@9 cents per lb.

BEESWAX.—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

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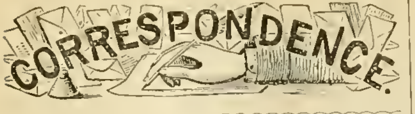
☞ The Iowa Central Bee-Keepers' Association will hold their annual meeting in the Court House at Winterset, Iowa, on Friday, Nov. 7, 1884. All interested in bee-culture are requested to be present.
J. E. Pryor, *Sec.*
A. J. Adkison, *Pres.*



For the American Bee Journal.

Bee-Stings, Camphor, etc.

DR. G. L. TINKER.

Mr. C. G. Beitel, on page 681 of the BEE JOURNAL, desires an opinion on the effect of camphor applied to bee-stings. My reply is, that spirits of camphor has probably been applied as a remedy for bee-stings times innumerable, without serious results; but in my opinion it or any other stimulant and irritant is contra-indicated on the principle that adding fuel to fire is never advisable where you wish to put out the fire. Sedatives, and more particularly cooling applications, are indicated. In the list of sedatives, belladonna and hot water rank first; and among cooling applications, ice, cold water, clay, etc., are best. Non-stimulating alkalies locally and internally are useful.

The primary effect of a large number of stings, and possibly sometimes of only one in very susceptible persons, is to powerfully depress the nervous system, to impede and even to stagnate the circulation of the blood. The reduction of temperature is marked, and a chill or intermittent rigors may supervene, the skin meantime becoming mottled as in the poisoning by some kinds of animals. These symptoms are the indications for strong stimulants internally, like whisky. If reaction is established, recovery is generally assured; but it is followed speedily by a very frequent pulse and a very high temperature, much swelling and a peculiar itching sensation with more or less pain and heat in the affected parts. These symptoms indicate sedatives internally, like belladonna, aconite and nitrate of potassa, to control the active capillary circulation, and locally, ice, cold water, or other cooling applications; especially should the head be kept cool.

Recovery takes place in 24 to 48 hours from the active symptoms, leaving swelling, itching, and stiffness of the parts stung, for several days afterward. The patient should be kept as quiet as possible, and in a cool place until the swelling subsides. The above is the treatment which I have successfully followed in severe cases.

In the case of Mrs. Sturdevant, alluded to on page 636, it seems probable that the relation of cause and effect, as held by the physician in attendance, was well taken. However, the aggravating effect of the spirits of camphor may have precipitated a fatal result. The notable feature of this case is the point at which the sting was received. The physician, probably, in locating it so accurately, had in view the possibility of the large sensory nerve (the *superior maxillary*, which emerges from the *infra-orbital foramen* at or near the point entered by the sting) being punctured. It is my opinion that this nerve, or some part of the *infra-orbital plexus* joining with it, and which could be reached by a bee's sting, was so penetrated and the poison lodged in its substance. Such an accident would produce a powerful impression upon the great life-centre, the *medulla oblongata*, with which the nerve communicates by a very short route. Probably the most dangerous point where one can be stung is just beneath the eyes.

Care should be taken in working with ugly colonies, not to leave them in a mood, as is too often the case, to attack any one. Persons passing near are liable to be stung by them unexpected and seriously. I would advise the superseding of all ugly colonies promptly; but if they are to be kept and handled, they should first be thoroughly smoked with tobacco before opening the hives. I use Scotch snuff thinly spread upon dry cotton-cloth; roll it up, set fire to the roll, and put it into the smoker. It takes the fight all out of the ugliest colony in short order, and they are not apt to volunteer an attack for a week afterwards. Tobacco does not seem to do them any harm. By the way, the Germans, and the German hybrids are the only bees which have, in my experience, required the use of much smoke.

In answer to Mr. Wismer, on page 635, I will say that the animal scent of bees and the odor of bee-poison are quite different. The first may be readily detected on any evening in summer, when the bees are briskly fanning at the entrance; the latter, on opening a hive on a cool day, when numbers of the bees will elevate and protrude their stings, at the ends of which may be seen a tiny drop of the poison. I would ask Mr. Wismer whether he thinks that the venom of a bee's sting and the acid secreted in the stomach of the bee, are identical? If not, I am unable to see the point in the question he propounds.

Again, it is improbable that bees ever deposit the poison of their stings in the honey; nor do I believe, as has been suggested, that sealed honey is ever coated over or permeated by it in any way. I am sure that I have taken hundreds of pounds of comb honey without a particle of the poison getting upon it while taking it off. It is not at all likely that the cause of disagreement of honey with some people is due in any way to the venom of bees' stings.

In this connection I desire to thank Mr. Wismer for bringing to the notice of bee-keepers, not only other cases where bees have perished upon winter stores exclusively of sugar or syrup, but for the presentation of several cases in which bee-diarrhœa has resulted where nothing but sugar stores were provided.

New Philadelphia, Ohio.

☞ The bee-keepers of McDonough and adjoining counties are requested to meet at Bushnell, Ill., on Nov. 20, 1884, for the purpose of organizing a bee-keepers' association.

J. G. NORTON.

Country Gentleman.

After-Swarming.

W. Z. HUTCHINSON.

The first swarm which leaves a hive is called a "first" or "prime" swarm, and it does not usually issue until several queen-cells are well under way, and perhaps one or more of them sealed over. As soon as the first queen hatches, if a flow of honey continues, she leads off a second, or "after-swarm," and as the young queens continue to hatch, they also continue to lead off after-swarms, the number which issue depending upon the yield of honey, the amount of brood left in the hive by the prime swarm, and the weather. Of course, each successive swarm is smaller than the preceding one, the last one often not containing a pint of bees, and if hived in the usual manner, would amount to nothing; but by hiving it upon empty combs, and perhaps giving it a frame or two of hatching brood, and feeding it a few pounds of sugar syrup, even if it does not secure a sufficient amount of honey for winter stores, it can usually be brought into good condition for passing the winter; and having a young and vigorous queen, it is almost certain to prove an excellent colony during the succeeding season.

One peculiarity about after-swarms is, that they are likely to issue at almost any time of the day, or in almost any kind of weather, instead of choosing the middle of a fine day, as does a prime swarm; they also go farther from the hive to cluster, or perhaps go off without clustering.

When honey is more desirable than increase, even prime swarms are not welcomed by some bee-keepers, while each after-swarm is looked upon as a misfortune. One method of preventing after-swarming is to open the old hive after the first swarm has issued, and cut out all the queen-cells except one. The objections to this is the trouble of performing the operation; and, if the cell which is left fails to produce a perfect queen, the colony is left hopelessly queenless. Giving the old colony a laying queen, as soon as the first swarm has left, will usually prevent after-swarming, at least for the time being, as the queen will at once destroy all the queen-cells; but as soon as the hive becomes populous, she will often lead out a swarm. Giving the old colony a newly-hatched queen, or a queen-cell nearly ready to hatch, will also prevent after-swarming, and is preferable to giving it a laying queen, unless increase is desirable. A newly-hatched queen, or a queen-cell ready to hatch, is of little value, while a laying-queen is worth at least one dollar, and the colony, not having a laying-queen until the young queen is fertilized and laying, does not become populous quite as soon, and, consequently, is less inclined to swarm. A colony with a young laying-queen, is not so apt to swarm as one with an old queen.

The writer has, the present season, practiced to a considerable extent, this method of preventing after-swarming; that is, giving the parent colony a mature queen-cell soon after it has cast a swarm, and in no instance has a colony thus treated swarmed again. He has a small slate hanging upon a nail driven into the back of each hive, and when a swarm issues, the date is marked upon the slate. He has learned by experience that more of the young queens hatch sooner than the sixth day after a swarm has issued, usually about the seventh or eighth day; and, when a colony from which no after-swarms are wanted, casts a swarm, it is an easy matter, by examining the dates upon the slates, to find a colony which has swarmed six or seven days previous, from which to obtain a queen-cell nearly ready to hatch, to give to the colony which has just swarmed.

Another method of preventing after-swarming, is to place the new swarm upon the old stand, removing the parent colony to a new location. The flying bees all return to the old location, and join the new swarm, which so reduces the strength of the old colony that it often casts no second swarm. The writer, however, carries this method one step farther, and makes of it a complete success; in fact, it is his favorite method of preventing after-swarming, and is as follows:

The new swarm is hived in a new hive and placed upon the old stand, but, instead of carrying the old hive to a *distant* new location, it is placed beside the new swarm, the *rear* of the hive being in contact with the new hive, but the front turned to one side at an angle of 45°. So far as the flying bees are concerned, the old hive occupies a new location fully as much as though it had been carried away rods distant, for they all enter the new hive on the old stand. Each day the old hive is slightly turned toward the new hive, until, at the sixth day, it stands close beside and parallel with it. The bees of each hive recognize and enter their respective homes, but let either hive be removed, and all the flying bees will enter the hive left upon the old location. On the seventh day, the old hive is picked up and carried to a distant stand, when, of course, all the flying bees join the new colony upon the old stand, leaving the old colony so reduced in numbers just at the time when the young queens are hatching, that all thoughts of swarming are abandoned, the first queen that hatches biting into and destroying the remaining queen-cells, together with their occupants. If several queens hatch at about the same time, there are royal combats which result in the "survival of the fittest."

When this method is adopted, the honey-boxes should be removed from the old hive to the new one at the time of hiving the swarm. The great mass of workers will then be where the honey-boxes are, which is as it should be. In the writer's opinion it is better always to put on boxes at the time of hiving a swarm, and then contract the brood-nest to such an extent as to crowd some of the bees into the boxes. (When this is done, unless a queen-excluding honey-board is used, the queen will often make mischief by invading the surplus department.) A delay of even 24 hours in giving boxes to a newly-hived swarm is often fatal to securing the best results; as, where bees commence work when hived, there they will continue to work until they are compelled for lack of room to work somewhere else; if given boxes at the time of hiving, and crowded into them, they will commence work in both them and the brood-nests, and all will go well. The only reason why the writer did not practice the last-described method exclusively the present season is, that he had 25 cumbersome chaff-hives which were extremely difficult of removal; hence, when a swarm issued from a chaff-hive, the colony was given a mature queen-cell taken from one of the other hives which had just been removed to a new stand.

Some bee-keepers manage after-swarms by hiving each one upon sheets of foundation, and placing the hive containing it, by the side of the parent colony. If another one issues from the same colony, it is hived in the same manner as the first, and placed upon the opposite side of the old colony. As soon as one of the young queens is found laying, all the bees are shaken down in front of the old hive, and the drawn-out combs of foundation put away for future use.

The point to be considered, in many localities, is this: The main honey-harvest is of short duration, not usually more than six weeks, and to secure the best results, there must be an abundance of workers, during this period, in the hive where the honey-boxes are. If the body of workers is divided up, by swarming and after-swarming, into mere squads, the harvest is ended ere any of them have recruited their ranks sufficiently to gather and store it in proper shape for market.

Rogersville, Mich.

* * *

For the American Bee Journal.

Pollen and Hibernation Theories.

JAMES HEDDON. ♀

Many observations have puzzled me to harmonize perfectly with the "pollen theory," and that is the reason why I still call it a "theory." Let us look fairly at Dr. Miller's puzzle on page 683.

Are we not all well aware that bees have, for many years, wintered well with pollen in their combs? That they oft-times starve before they will touch it? That in many cases, as the honey gave out, they eat the pollen (bee-bread) and quickly die with diarrhœa? Many thought, after witnessing such a phenomenon, that "starvation was the cause of bee-diarrhœa."

We know that starvation is no direct cause, but we believe it to be the consumption of bee-bread in confinement. In the diarrhetic excreta we find pollen, not starvation.

Now, Doctor, none of us have crawled into a hive and passed the winter with the bees. We have seen but very little of their actions during confinement, from without. We depend much upon rational and logical theorizing. We can easily imagine many reasons why, in one case, the bees would commence on the bee-bread just where the honey left off, and in another stop all consumption when the supply of honey ceased. What I am trying to find is a case where the intestines of the bees become loaded with fecal matter without the presence of bee-bread, or honey laden with floating pollen. As soon as I find such a case, I will give up my theory and at once announce it, so that we may waste no more time and money in this line, but throw all our energies in another, and what we deem the most profitable direction.

Sometimes when a cell containing pollen below and honey on top is extracted of its honey, we find a dried, glazed surface upon the pollen, making a perfect division between the two commodities; at other times we find no such glazed division, but find that the honey has soaked into the pollen, as it were, and when we extract the honey, some of the top portion of the pollen comes out with the honey and injures its flavor. This is rarely seen except when extracting combs from which bees perished during the winter. Think of these things.

THE HIBERNATION THEORY.

Just as I feared, there now seems to be a misunderstanding regarding what different persons mean by hibernation. As I understood Mr. Clarke's first article on that subject, he had what was to me a "new" and false theory. As I understand him now, he has an old, well-known, and true theory. He told us some time ago that to get bees into this hibernating state, we must have a low temperature; cold, and, as he thought it necessary that they should often arouse from that hibernating condition, he would occasionally advocate the other extreme. From this I inferred that he believed that circulation, motion, and heat-throwing-off and producing power all ceased, as is the case with wasps which pass the winter in a state of perfect torpor and isolation.

I do not claim to know, but I do not believe that our colonizing bees ever enter for one moment into any such condition. If Mr. Clarke will hold to this former ground, he will have a new theory, and one on which we radically differ; but if he only holds to the theory that bees often do winter the best and the cheapest when they enter an almost perfect state of quietude (one in which they consume very little food, hardly making a sound or motion of the air; one which is aided by an even cool temperature, but not a low or changing temperature; one in which at all times circulation is going on in their bodies, the same bodies exuding warmth—bodies which will move at once if touched, and always possessing sensation), then we will agree in regard to the best condition for bees during winter. But the theory is not new, but old and well-known to us all, and is a theory of effects and not causes.

To show the ground which Mr. Clarke must take to get up an opposition with me, or any legal claims to newness of theory, I will quote one paragraph from the *Kansas Bee-Keeper* for April 1884, which is several months older than his first article on the hibernation subject.

"Now, for the 'pollen theory.' What is it? In short it is this: The bee, unlike many other insects, exists in two different states during its life, viz: The fully-animated, and the 'semi-hibernatious.' It would seem that any animal, existing at different times, in such extremely different states, would require for success, extremely different conditions and food. This is just what we find to be the facts in the case. In summer the bees are active, and require a home and food adapted to the needs of activity; in winter, when in the quiescent state, they require surroundings and food adapted to that condition. As above stated, these conditions differ widely."

Now, I would like to know what is new in Mr. Clarke's theory.

Dowagiac, Mich.

For the American Bee Journal.

Too Much Drone-Comb.

G. M. DOOLITTLLE.⊙

A party writes, saying, "I have many frames of comb in which I find both drone and worker comb. How shall I proceed to get rid of the drone-comb, and not have the bees build the same kind in again? Please answer in the BEE JOURNAL."

Too much drone-comb in the brood-chamber is a very serious damage to the honey crop, as drones are only useless consumers, being of no value except to fertilize the queens; and in these days of progression, no person can afford to allow a promiscuous production of drones. One or two square inches of drone-comb is all that should be allowed in any hive, except in one or two containing the choicest colonies, which should have enough drone-comb to rear all the drones that are needed in the apiary.

As all colonies will have a little drone-brood, anyway, even if they have to cut down worker-comb to get a place to build comb for it, it is well to let each colony have about 2 square inches of drone-comb, which should be all in one frame. This frame should be marked so that where the production of all kinds of drones is not wished, it can be lifted from the hive every 20 days, and the heads of the drones shaved off.

From the above it will be seen that our correspondent has asked a very pertinent question, as the bees will nearly always again fill the place, where drone-comb has been cut out, with comb of the same sort. The only way I know of to stop their doing this, is either to give the combs having drone-comb removed from them, to nuclei having a young queen (as such nuclei will always build worker-comb), or after cutting out the drone-comb, fit worker-comb in its place. While the latter does not give as perfect combs as the former, it has in its favor the immediate use of the combs in full colonies; for it is often midsummer before many nuclei are strong enough to build combs at the bottom of the frames, where most drone-comb is found. Hence, I generally use the fitting-in plan, in doing such work.

If there is a large patch of drone-comb in a frame, I cut it out with a narrow-bladed, sharp knife, after which the frame is laid over another frame of comb, which has some drone-comb in it also, so as not to spoil a good comb. I lay it so that the empty space comes over the worker-comb, when the lower comb is worked a trifle larger than the space to be filled, after which the marked piece is cut out and pressed into the place where the drone-comb came from. If the piece should happen to be a little small, a few drops of melted beeswax will hold it in place till the bees fasten it.

For small patches, from an inch to 4 inches in diameter, I use punches of the proper size, made of old fruit cans. These can be found about hotels if canned fruit is not used in your own family, and need not cost anything. When you have collected your different sizes, place the ends on a hot stove when the solder will melt, thus letting the top and bottom off, as you place either end on the stove. After the tops and bottoms are off, make the whole circumference of one end sharp, with a file or grindstone, sharpening wholly from the outside. Now lay the comb down flat on a smooth board, and with the right-sized punch, cut out the patch of drone-comb by twirling the punch or can around as you press down on it. Now push out this drone-comb, and with the same punch, and in the same way, cut out from some discarded frame a piece of worker-comb, which will, of course, exactly fit the place you took the drone-comb from. In this way it is no great task to rid all the frames of drone-comb. If any have honey in them so you cannot tell where the different kinds of comb commence or leave off, you will have to wait until the honey is taken out by the bees, when these can be fixed also.

In this way I go over all my combs, nearly every spring, just after pollen becomes plenty, getting out the drone-combs. "But," says one, "your plan cannot be effectual, or you would not need to thus go over your combs every year." To such an one I would say, that combs are not always like a piece of iron which will stay for years as first made; but with me the mice sometimes will get in a hive in the winter, in spite of all precaution, and gnaw a hole into the combs, which hole the bees fill with drone-comb unless I get the start of them and fill it with worker-comb, as above described.

Then, again, the moth-larva will get in while extra combs are stored away, or the bees, in cutting down old queen-cells, or removing old, moldy bee-bread, will cut out the comb also; and by numerous ways drone-comb will get in after the combs are comparatively perfect; hence, it requires vigilance in this as well as in other things, if we would reap a reward. One of the objections I have to wired frames, is their liability, from some of the above causes, to get drone-comb in them, in which case it is not as easily replaced with worker-comb as is the case where no wire is used.

Borodino, N. Y.

SELECTIONS FROM OUR LETTER BOX

Report of Honey Crop for 1884.

I commenced the season with 52 colonies, spring count, and increased them to 56 colonies. I have taken 910 pounds of comb honey from 34 colonies, 160 pounds of extracted honey, and 10 pounds of beeswax. Every colony is in good condition, and each has at least 30 pounds of good, capped honey to winter on. To-day I covered all the brood-chambers with old rags, and I will winter my bees on the summer stands. The bees have failed to bring me in a profit this year, the cause of the failure being beyond their or my power, so I prepared them for another winter, hoping for brighter prospects in the season of 1885.

R. M. OSBORN. ♀

Kane, Ill., Oct. 22, 1884.

Getting Sections Completely Filled.

At the Chicago Convention, Mr. Heddon is reported to be working out a plan to get sections completely filled with honey. Some years ago, when I was engaged in the bee-business, I used to let my bees build and store in the ordinary frames; then, with a sharp knife I cut the combs from these frames, laid them gently on a piece of clean blanket, re-cut them to the sizes required, slipped the sections over the pieces, and in the evening placed them in the hive to have the bees dry them off. Early on the next morning, I removed them. The plan worked well, was not much trouble after I got used to it, and the sections looked neater and cleaner than I could get them in any other way. Perhaps this may be Mr. Heddon's plan.

A. MALONE.

Garden Island, Ont., Oct. 25, 1884.

Cure for Bee-Stings.

At the late meeting of the North-western Bee-Keepers' Association, we notice various remedies for bee-stings, nearly all of which we have tried, but have found nothing so effective as the following: Take equal parts of the tincture of aconite, laudanum and chloroform, bathe the wound once or twice, and the pain and swelling will leave. For many years as druggist, I have known of this remedy being used successfully in neuralgia and other like diseases. Three years ago, in working in my wife's apiary, we first tried this remedy, and it was a success, although we seldom use anything unless stung in the face; and such are about all who wish a remedy for bee-stings. Remember this and try the recipe next season.

M. F. Tatman.○+

Rossville, Kans., Oct. 23, 1884.

My Report for 1884.

The spring of 1884 was cold, windy and rainy, and it remained so up to July, being intermingled with only a few warm days. Bees did not gather much honey during fruit blossom, as it was almost too cold and rainy. White clover blossoms were plenty, but they had a brownish appearance and secreted very little honey. Bees just got enough honey to make them crazy for swarming, which they commenced on June 1, and kept it up till July 18, and at that time the flow of honey ceased from all sources; weak colonies had to be fed up to Aug. 20, when Spanish-needle made its appearance; and what a sight it was to see the fields covered with yellow flowers. The colonies which were strong at that time, stored considerable surplus honey of a very good quality; and weak colonies gathered enough to last them during winter. I commenced, last spring, with 63 colonies, 23 of them being very weak, and the balance were in good condition. I have increased them to 100 colonies, mostly by natural swarming. I obtained 200 pounds of comb honey from white clover, and 250 pounds of extracted, some of it being honey-dew, which I fed back to the weak colonies during the honey-drouth. My surplus fall honey amounts to 420 pounds of comb, and 1,400 pounds of extracted, making in all, 2,270 pounds for the season, being an average of 36 pounds per colony, or one-third of an average crop. I have made inquiries of my neighbor bee-keepers, and find that some have received no surplus honey. Some of their colonies are very weak in bees, and have but little honey, and, I think, will hardly live through the winter. Their bees are all blacks; mine are Italians, Holy Lands, Cyprians and hybrids.

John Nebel.○+

High Hill, Mo., Oct. 27, 1884.

Wintering Bees in "Clamps."

In the fall of 1883, I buried 8 colonies of bees just as we bury potatoes in Iowa to keep them from freezing. Two of them were in 1½-story Langstroth hives, with the honey-boards on, and the holes in the honey-boards open. The other 6 colonies were in 1-story hives with quilts and covers on the tops of the frames. They were put into the clamp on Nov. 28, and taken out on March 25, 1884. Eighteen inches of earth, and 3 feet of coarse hay was on top of the hives, and no ventilation was given to the 6 colonies. The 2 that had ventilation through the honey-boards, wintered the best. I never saw bees in better condition than they were in March. The others which had no ventilation at the top, did not winter as well, but came out in better condition, on an average, than those which were wintered on the summer stand: but those taken out of the clamp dwindled so that on May 1, they were the weakest in the apiary. One of the 8 colonies I got out of the woods during the last of October, 1883. I hived them on three frames about one-half full of honey, and they staid on the summer stands for six weeks before I put them into the clamp. I do not think that they had over 6 pounds of honey. When I took them out in the spring, they did not have one drop of honey in any shape, but had brood in two combs, and young bees hatched. Two other colonies had no brood in any stage, and I thought that they had no queens, but on the next day I examined them and found that the queens had just commenced laying, and I watched them very closely to see whether Mr. L. C. Johnson, of Fountain City, Ind., was correct in his article on page 592 of the Bee Journal for 1883. These bees were Cyprians crossed with Italians, and the bees were hatched in 17½ days. I made another test on a Cyprian queen whose eggs hatched bees in the same length of time, and queens in 12 days. In the first test I did not try to rear queens. On Oct. 15, 1884, I put 8 colonies of bees into "clamps." They were late swarms; some had not more than 1 pound of honey, and the heaviest had not more than 3 pounds. I knew that they would die if left on the summer stands, but I thought that if I could get them to hibernate, that they might winter. Am I correct?

Wm. Malone.♀

Oakley, Iowa, Oct. 24, 1884.

Report for the Season.

Last spring I commenced with 21 colonies of bees in box-hives, and lost two by robbing. When the bees first began to bring in pollen, I thought it best to feed them a little; so I made some bee-feeders, put a pound of sugar syrup into each, and at sundown I put them on the hives. On the next morning before sunrise, I took them off, and the feed was all gone. So far all was well; but right here I will say that this was, I think, the most important day of the season. Box-hives with auger holes in their tops are not very good things to feed on; and, although, I tried to be very careful with both feed and bees, at 8 a. m. I had every colony in the yard robbing and being robbed. You who have had experience with bee-robbing can have some idea of what I did and what I did not do, as I had no veil, no smoker—in fact I did not have anything that I needed; and to you who know nothing about robbing bees, it would be no use for me to tell what I did, for you might have some doubts about it. However, night found me very tired, 2 colonies less, and a wiser man. During the season I lost several swarms by their going off. They would swarm out, fly above the apple trees, circle a few times, and then leave without settling. I administered everything that I had read or heard of, but it seemed only to drive them away the quicker. I believe that if a swarm intends to cluster, they will do so without any help; and if they intend to leave, they will do that also without help. I think that I had my bees built up pretty strong by the time white clover blossomed, but they did not get into the sections for two weeks, and then they were rather slow about it. There was a good bloom of basswood, but it only lasted about six days, and four days of that time were cold and rainy. Between showers, the bees would come out as though they were swarming, but before they could load up and get back, there would be a shower; and as the bees had to cross the river, I think I lost lots of them after the rain was over, for they would be floating thickly on the water. I did not get one-third of a crop of honey. My bees did better than the most of the bees near me. I increased them to 32 colonies, and would have secured about 500 pounds of comb honey had it not been stolen. I took off about 160 pounds of honey, and left, as I thought, 400 pounds on the hives. I went away from home over night, and when I returned there was not a full section in the yard; they had stolen all of it, and had done a clean job, so much so that I have yet gotten no track of the thieves. If I did not gain anything in dollars and cents, I learned something.

Dave H. Lisle.○+

Chebanse, Ill , Oct. 25, 1884.

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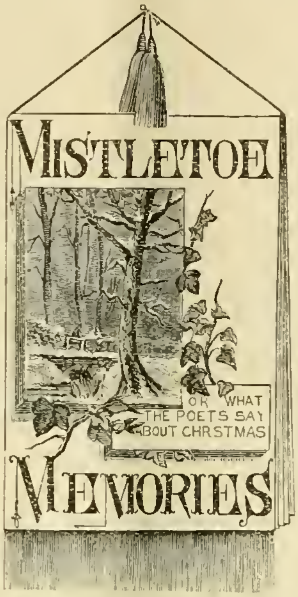
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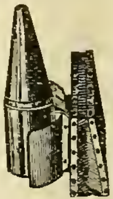

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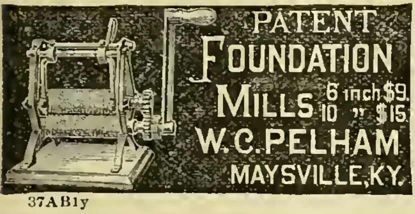

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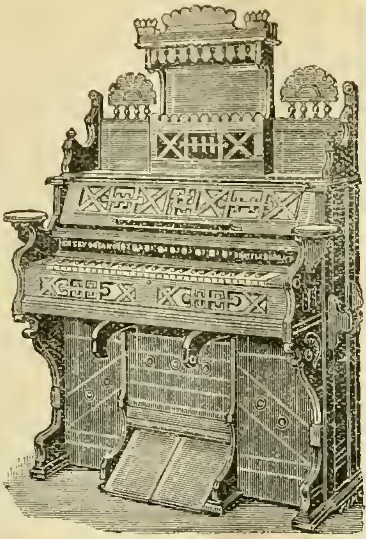

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GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine.
4A1y

NOW IS THE TIME.

I have less than 60 copies of the Bee-Keepers' Handy-Book. No more will be printed until the type is reset. One of our improved Drone and Queen-Traps and the book bound in cloth will be sent by mail for $1.50
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1868. 1884.

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COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

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I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

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is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

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Restoring the Drowned,
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Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
Contagious Diseases,
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ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., November 12, 1884. VOL. XX.—No. 46.

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925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **50 cents.**

Entered at the P.O. as Second-Class matter.

TO CORRESPONDENTS.

The Subscription Price of the Weekly BEE JOURNAL is **$2.00** a year; and of the Monthly, **50 cents** a year in advance. New Subscriptions can begin at any time.

Club Rates for the Weekly are: $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

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Sending Money.—Remit by Express, Post Office Order, Postal Note, or Bank Draft on New York or Chicago. If neither of these can be obtained, Register your Letter, affixing stamps both for postage and registry, and take a receipt for it; or send it by Express. Money, sent as above described, is AT OUR RISK, otherwise, it is not. Do not send checks on local banks, which cost us 25 cents each, at the banks here, to get them cashed.

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Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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TO CORRESPONDENTS.

Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

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All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

To Canadians.—We take Canadian money for subscription or books; and Canadian postage stamps may be sent for fractions of a dollar.

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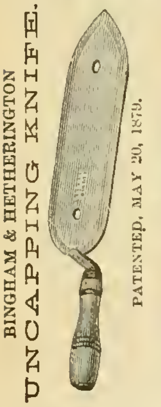
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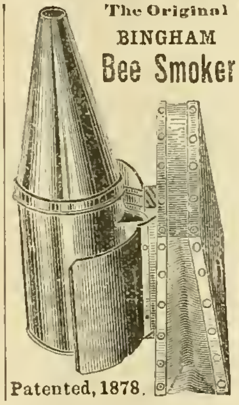

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding—Swarming—Dividing—Extracting—Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00**; 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00**; for 100 colonies, **$1.25**; for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25**; 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

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Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25**; paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00**; in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.**, in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or $8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., NOVEMBER 12, 1884. No. 46.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

The National Convention.

We have this week given the report of the concluding sessions of the Continental Bee-Keepers' Convention at Rochester, N. Y., as sent to us by our special reporter, and we heartily endorse the sentiments he has so ably expressed in the following letter:

On the morning of the first day, as the advance guard began to arrive, there were symptoms of nervous uneasiness on account of so many prominent Western bee-keepers having intimated their inability to attend. Ontario was represented by several prominent bee-keepers, but throughout the meetings the absence of Western brethren was a lamentation. This, no doubt, had something to do with the movement to try and make future meetings of the association more representative in character. It was thought by some that parties appointed as delegates by local societies of bee-keepers would be more likely to make an effort to attend.

The Eastern men showed an excellent spirit, and no disposition was manifested to make any undue use of their power in monopolizing future meetings. There was a feeling often expressed in favor of doing nothing but what was for the greatest good of the greatest number.

President Root won golden opinions from all by his urbanity, kindness, and able discharge of the duties of chairman. Both in public and private he was most genial, polite and kind. Truly, the mantle of Father Quinby seems to have fallen on his worthy son-in-law. Long may he live to honor it, and be honored by it.

Any little sectional jealousies that may have existed at the outset were allayed and disappeared. It was a time of hearty good fellowship. No doubt the discussions would have taken a wider scope, and been more instructive if more of our prominent bee-keepers had been present, but the general feeling was that the meetings had been pleasant as well as profitable, and on separating all were ready to say, "Happy to meet, sorry to part, and glad to meet again."

The Convention passed a resolution recommending the *American Apiculturist* "as one of the best bee-periodicals published in the interest of bee-keeping." This resolution was mild and friendly, but we do not think it was *wisdom* to select one paper (and that the very youngest) upon which to pass such a resolution in a Continental Society. It begets a feeling of jealousy and unfriendliness among the others towards the one selected, and thereby *damage it*.

This we regret, for we regard the *Apiculturist* as a good paper, and fully agree with the sentiment expressed, but regard it as very unwise action on the part of the Convention.

☞ One of our friends has sent us the following letter, which explains itself:

EDITOR BEE JOURNAL:—Enclosed you will find a "paster" of a monthly bee-paper published in the East, which was sent to me with the request to use it on all my circulars, business letters, *postal cards*, etc., and the inducement was the insertion of my business card in the paper one year. I do not wish to accept the offer for the reason that I do not consider it "the best bee-paper in the English language," but I could consistently put on such a notice of the old AMERICAN BEE JOURNAL. Can you not have a lot of them printed and gummed, and send them to the supply dealers? I will put them on all my correspondence. V.

One word of caution is necessary. Such "pasters" cannot be attached to Postal Cards without causing the one to whom it is addressed to be assessed *two cents extra* for extra postage.

Yes; we will cheerfully supply, without cost, such labels to any one for attaching to Letters, Circulars, etc., if desired.

☞ The subsequent article on Foul Brood, by Mr. Frank Cheshire, has been crowded out by the report of the National Convention. It is in type, and will appear next week.

Selling Honey-Dew as Honey.

The following letter will explain itself:

Reading about some men selling honey-dew, it has occurred to me that there might be some way to prevent such frauds. If men who handle honey would insist that every man should put his name on every package which he sends to market, it could easly be traced to the guilty party. There was one man who sold perfectly worthless stuff about Cresco, Iowa, and it nearly ruined the market for extracted honey. Bees have done fairly well in this section, my average being 150 pounds per colony.

L. E. WEBSTER. 6

Bonair, Iowa, Nov. 4, 1884.

We have for a long time insisted that every apiarist should label the honey sent to market, and that the label should be a guaranty of its purity. In that way a steady and regular demand will spring up, which will also be remunerative to the honey-producer, and at the same time be a "safe-guard" against imposition. Honey-dew should never be sold as honey; and those who do it once will have cause to regret it ever after.

☞ The fare on the different railroads centering in Chicago, is $25 for the round trip to New Orleans during the World's Exposition. What a fine chance for a World's Exposition Bee and Honey Show!

☞ At the Fair at Fremont, Mich., there was a good honey display by Mr. George Hilton. The *Indicator* remarks as follows concerning it: "George Hilton was on hand with a complete outfit of articles necessary to carry on the honey business, and also displayed some very handsome honey. No one in the State pays more attention to the comfort and welfare of the busy bee than George, and his entire outfit is of the best improved order. His 'bee village,' in this town, is a good-sized Fair of itself."

Local Convention Directory.

1884. *Time and place of Meeting.*

Nov. 13.—Southern Illinois, at Duquoin, Ills.
F. H. Kennedy, Sec.

Nov. 14.—Mahoning Valley, O., at Ravenna, O.
E. W. Turner, Sec.

Nov. 19.—Massachusetts, at Worcester, Mass.
J. G. Jefferds, Sec.

Nov. 25.—Western Michigan, at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

1885.
Jan. 6.—Southern Wisconsin, at Janesville, Wis.
J. T. Pomeroy, Sec.

Jan. 14,—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Hunting Adulteration.

In reference to the honey of Mr. F. H. Hunt (claimed to be adulterated), mentioned on pages 424, 475, 492 and 563, we have received the following, which will explain itself:

Editor Bee Journal.—*Sir:* I am in receipt of a communication which reads as follows:

"Chicago Sugar Refining Co., Chicago, Ill., Oct. 25, 1884. T. L. Von Dorn, Esq., Omaha, Neb.—Dear Sir: The sample of honey left by you has been tested in our laboratory, and was found to be strongly adulterated with glucose syrup, containing over 50 per cent. of its weight of the latter substance. Yours respectfully,
Dr. Arno Behr."

The sample tested was the contents of one of the bottles which I exhibited at the Chicago Convention, and was obtained of Mr. Tamblin, of Lincoln, Neb., by Mr. S. L. Thomas, Vice-President of the Nebraska State Bee-Keepers' Association. This so-called honey was obtained by Mr. Tamblin of F. H. Hunt, of Centre Point, Iowa. Mr. Tamblin had nearly one ton of it on hand a short time ago.

I hope that this will settle the question of who is right in this controversy, and it ought to cause a blush of shame on those who have upheld the fraud. I think that bee-keepers, generally, will not think my efforts to uphold their good name and expose the frauds, have been guided by any but the best of motives.

T. L. Von Dorn,
Pres. Neb. S. B. K. Ass'n.

Mr. Von Dorn claimed, on page 475, to have submitted some of Mr. Hunt's honey to a chemist for analysis.

Mr. Hunt claimed, on page 563, that the result of that analysis was a vindication of his honey.

Mr. Von Dorn brought some of the honey to Chicago, last month, and left it with Dr. Behr to be analyzed, and the above report is the result, as stated by Dr. Behr, showing that it contained 50 per cent. of glucose.

Without desiring to prolong this controversy, the Bee Journal would say that this looks conclusive, providing there is no mistake as to the identity of the honey.

We have long maintained that the producer's name should be a synonym of purity, and that fraud and adulteration should be condemned and severely punished. Therefore, if Mr. Hunt cannot clear himself of the charge, he is by the above, proven to be an adulterator, either by feeding the bees glucose or "mixing" honey and glucose afterwards.

This is a serious matter, and calls for *proof* to the contrary, *if it can be given.* We will say in advance that Mr. Hunt's reply (if he offers it) *must* give the facts, calmly recited, without abuse of those who have caused the investigation. If Mr. Hunt has any facts, proofs, explanations, arguments, confession or apology to offer, such will duly appear, as we have no wish to injure him or his business. But we cannot admit personal quarrels or vituperation (such as the last communication he sent for publication). The *facts* are now demanded, alike by friend and foe.

◆

A Lady's Success with Bees.

Mr. J. J. H. Reedy, in the *Nebraska Farmer*, gives the following description of Mrs. J. N. Heater's apiary and its management, and of her excellent exhibit of bees and honey at the Fair:

The bees were of pure Italians, three-banded brood in all stages was in the exhibit. We will first mention the appliances shown, viz: Noine honey extractor, queen-cell, cages for shipment, Langstroth single-walled hive, frames, etc.

Mrs. Heater has done remarkably well, and the earnestness with which she labors is a fit example for others to imitate. The care of many bees is a tax on one's time and strength, but with a wise use of proper implements, much better work will be accomplished. Mechanical ingenuity is a great promoter of home comfort, and the possessor of an ordinary talent for the work may attain success in the line of providing for the protection of the bees under his care.

Mrs. Heater has devoted several years to the care of bees, and her interest is quickened much by her great success.

The honey, both in comb and extracted, was of fine quality and nicely arranged, evidencing good taste and excellent judgment in the details of the work. The profit to the keeper, and the benefit to the community of having such home enterprises is our joint plea in behalf of bee-culture. The business is ennobling, and leads to better perceptions of the useful and beautiful. In it there is no element of degeneracy; nor does it lead to the destruction of anything that is of any special benefit to the community. It enlarges our minds in the reception of the truths of natural history, and paves the way for a more liberal culture in the art of home adornment and in the supplying of innocent employment for otherwise dull and unemployed hours.

To say that the occupation is a constant incentive to industry, and draws away the mind from intemperate or dissolute habits, is but a feeble expression of the influence of the work upon those engaged in it. It does much more: it moulds character, whenever the enterprise has the soul-sympathy of the one engaged in it—lessons of industry, sobriety, earnestness, zeal; all these are aids in correct habits. The blessing of God and man rests on the apiarist, in the honorable pursuit of his calling!

A few words as to the wintering of bees: Mrs. H. favors the double-walled chaff hive, which she uses with some small changes during the summer, believing it as necessary as in the winter. Her colonies number 56, and her experience in wintering has been such that her words are entitled to some weight.

The objects of the bee-keepers' association of Nebraska, are commended by this lady, and we hope that in the near future the results of her past experience will be recorded for the benefit of beginners in so laudable an undertaking.

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☞ To all new subscribers who send us $2 for the Weekly Bee Journal next year, we will send the rest of the numbers of this year *free* from the time the subscription is received at this office.

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☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

◆

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly Bee Journal for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

North American Bee Convention.

[Concluded]

FIFTH SESSION.

The Convention was called to order at 7:30 p. m., with President Root in the chair. A discussion on comb foundation was the first order of the evening. It was opened by a brief essay read by J. Van Deusen, as follows:

COMB FOUNDATION.

The importance of comb foundation is evident to the great majority of bee-keepers. Its early stages of experiment have passed. The apiarist of to-day can justly boast of the best comb foundation in the world. Time was when the highest ambition of the apiarist was to obtain a *starter*—a comb-guide; but with the improvement in foundation, the guide is a thing of the past. The necessities of to-day are full sheets of worker foundation to build up colonies by which we are enabled, in a great measure, to control the number of drones in the hive, which has always been a serious drawback in the production of honey.

The bee-keeper of to-day can hive his colony on full sheets of comb foundation, and in less than 24 hours, under favorable circumstances, can see the queen supplied with cells in which to deposit brood as fast as she can use them, and the workers storing honey. They can also fill their sections with foundation, and under favorable circumstances, have them nicely filled and sealed over in 4, 6, or 8 days. With these facilities, it is left with individual bee-keepers to decide whether they will use a clean, light foundation which will make a surplus honey to please the most fastidious taste, and build up a reputation for nice honey such as no other Nation can produce; or whether they will use a dirty, heavy foundation and make such a honey as no one ever wants the second time. Choose ye between the two.

Make a nice surplus honey and establish a reputation which will command a ready sale at a good price. You have the facilities for making either. It is for you to decide whether you will use an inferior foundation and ruin your reputation for nice honey, or use a superior foundation and establish a reputation such as no other Nation can compete with.

A long and rather dull discussion followed the reading of this essay. For the first time during the meeting of the Society, the chariot wheels dragged heavily. Nothing new or interesting was developed, and at length in sheer weariness, the subject was dropped, and it was voted to take up something else.

The question of the bill of the Stenographic reporter, who took the minutes of the last convention, was brought up and referred to a committee consisting of Messrs. Pettit, Pierce, J. Van Deusen, W. F. Clarke and W. E. Clark.

REVERSIBLE FRAMES.

The question, "Is it advisable to use reversible frames?" was introduced by the President, and the Convention agreed to consider it.

Mr. Peet explained the chief advantage of reversing frames to be that the bees would then build comb to the very bottom of the frame, thereby making the sheet of comb stiffer, and providing more room for brood.

Mr. Pettit said that Mr. Wm. F. Clarke was a strong advocate of sticking as closely to nature as possible, would he think it unnatural to reverse the frames?

Mr. Clarke replied: That depends. We used to be told that the bees did not build their cells horizontally, but tilted them slightly upwards; and our bee-masters were in the habit of cautioning us in transferring bees, to keep the comb in the same position that they were in in the old hive. I have never tried reversible frames, but if the bees tilt their cells upward, I should be indisposed to turn them upside down.

This led to a most animated debate, Mr. Hall, of Ontario, stating that the bees tilted the cells upward a little; Mr. Betsinger denying it.

In the thickest of the debate, a sheet of comb on the Quinby frame was produced, and the majority considered that the cells were slightly tilted upward, but Mr. Betsinger insisted that they were perfectly horizontal. Still there seemed to be no difficulty arising out of reversing the frames on this account.

Mr. Hall saw no good in reversing. It was not needed to stiffen the frame. He preferred not to have the combs built clear to the bottom of the frame, for it left such a nice place for queen-cells. But if it was desired to have the combs built solid at the bottom, all that was necessary was to hoist the frame into a super. He had a large number of these frames which had been so built out.

President Root thought that there was no great object to be gained by reversing frames.

Mr. Betsinger differed from him, and predicted that the reversible frame was the coming frame. He had over 1,000 of them now in use in his apiary.

After some further remarks, the subject was dropped.

The committee on revising the Constitution of the Society reported as follows:

The committee on revision of the Constitution, on consultation with Mr. Betsinger, who was present at the meeting held in Philadelphia in 1876, find that the North American Bee-Keepers' Society should be composed of delegates from all the local societies throughout North America. They would, therefore, recommend and urge that the local societies do carry out this feature, and send delegates to the meeting of this Society at Detroit in 1885. The local societies will please correspond with the Executive Committee in reference to this matter.

On motion, the report was received, and a discussion on it sprung up. The fear was expressed that this action might discourage personal attendance at future meetings. It was also urged that if the Society became representative, a much larger attendance might be expected.

W. F. Clarke moved, seconded by U. E. Dodge, that the report be adopted with the following addition: While it is desirable that the Society should mainly be composed of delegates as originally contemplated, it is to be understood that individual members will, as heretofore, be eligible and welcome.

The hour of adjournment arrived while this matter was under discussion.

SIXTH SESSION.

The Convention met at 9:30 a. m., President Root being in the chair. A communication was read from the Warner Astronomical Observatory, inviting the Convention to visit it. On motion, it was resolved to do so at 1:30 p. m.

The programme committee reported the subject of Bee-Literature for discussion. Several speeches were made on this topic, indicating what is often manifest, viz: That almost everybody thinks that he knows how to run a paper better than the editors and proprietors. The evils of bee-papers being connected with the supply business were freely ventilated, and the importance of having bee-periodicals without any axe to grind, was insisted upon. Many things "wise and otherwise" were said, and finally it was

Resolved, That, while by no means disparaging the value and usefulness of other bee-papers, we as bee-keepers in convention assembled, recognize in the *American Apiculturist* a paper worthy of our support, and would recommend it to the bee-keepers as one of the best bee-periodicals published in the interest of bee-keeping.

An essay on "Foul Brood," from the pen of D. A. Jones, was read by the Secretary, entitled

CURE OF FOUL BROOD BY FASTING.

There has been much said of late on this subject, that it would seem to be pretty well worn out, but there are yet many apiaries suffering from the malady, where a simple and effective treatment would be gladly tried if known. I have experimented considerably, and I have found that the disease can be cured without any difficulty, without any medicine, without any danger of spreading the disease, when properly managed, and without any possibility of its ever returning.

Perhaps I may be allowed to describe the disease as I have found it in Canada. In speaking of foul brood, I would first distinguish it from all other bee-diseases, such as chilled brood, over-heated or scalded brood, neglected brood, starved brood, dead brood caused by shipping bees, and another kind of dead brood which resembles foul brood in some respects, and is doubtless what some call a mild type of foul brood.

It would make this article too long to describe minutely the appearance of the various kinds of dead brood above referred to, and the various causes of its appearance. I also do not wish to interfere with any other person's system of curing foul brood, but simply to give my own (which has proven successful with myself and scores of others), in the hope that those who have tried various remedies unsuccessfully, may be encouraged to try once more, and with no further expense and with but little trouble, rid their apiaries of this foul disease.

I do not believe, with some, that there is only *one* method of cure (and that their own). I know, by experience, that it can be cured in various ways, and I intend to continue my experiments, with the aim of still further simplifying, if possible, the method of cure.

Some imagine that foul brood may be discovered by the foul smell arising from the diseased colonies. This is true as far as it goes; but if one waits until then, there is a probability that very many if not all the colonies in his apiary have become diseased. Before such a condition had resulted, the disease would have been running for a long time in some one or two colonies, from which, especially in the spring or fall when robbing is carried on more or less, the surrounding colonies would surely be contaminated, and become themselves centres of infection. A single drop of honey taken from a diseased colony, if fed to the larvæ of a healthy colony, is sufficient to start the work, which, if unarrested, is inevitable destruction.

When the disease becomes very bad, much of the brood dies before it is capped over, and never is capped after it once dies. I have frequently seen colonies which had become so diseased that a very large portion of the brood had died just before it was capped, and some of the larvæ before it had its full growth.

In examining the larvæ just before and after it dies, I find that a dark spot first appears about its centre, and increases in size very rapidly. Shortly after its appearance, short, thread-like veins extend from this centre towards both extremities of the larvæ, and appear to plant two new spots, from which more veins soon radiate. The veins and spots then gradually enlarge until the entire larvæ is uniformly affected. The skin of the larvæ also commences to wrinkle and shrivel up on the top-side, the larvæ flattens down and gradually recedes to the back of the cells, and finally becomes the brown, putrid mass which so clearly distinguishes foul brood from all the above-mentioned maladies.

This brown, ropy matter has a sticky and tenacious, almost elastic, consistency, and if a pin-head be inserted in it and drawn slowly out, it will stretch like India rubber and jerk back into the cell again. The bees make efforts to remove it, but, after a few trials, give it up in disgust, and philosophically endure what even they find too incorrigibly obdurate to cure. Allowed to remain, this viscid substance, in time, dries up at the bottom of the cell and would not be noticed except by close observation.

Diseased larvæ, which is capped over, is indicated by a sinking of its capping compared with the fuller appearance on the capping of healthy larvæ. A small puncture is also made by the bees in the capping, varying in size from that of a pin-point to a pin-head. This seems to satisfy them that there is nothing to expect, and the cell is left to itself. If the apiarist opens such cells carefully, and finds the contents as above described, he may be sure that his bees have foul brood; but if the larvæ retains its shape and size, and the skins seem perfect, even though somewhat shrivelled, that is *not* foul brood. These punctures are sometimes made in merely dead-brood capping, their non-emergence at the proper time being noticed, doubtless, by the bees and thus investigated. Wherever foul brood exists in a colony during the breeding season, the brown, ropy matter in the cells may be found.

I could describe several methods of cure, but the following, I think, will be ample, and as it is very simple and easily performed, it comes within the reach of everybody: If the bees have any brood, I do not destroy that; but I remove the queen and all the bees that can be spared from the hive, leaving only a sufficient number to take care of the brood while it is hatching. I endeavor to have them all filled with honey before removing. They are then shaken into a box having a wire screen lid, and placed in a dark and cool cellar. The box should be turned down on its side, when the bees will cluster on the other side, which will then be upper-most, and the wire screen forming a side, for the time being, will allow of free ventilation.

They should be left thus from 3 to 6 days, according to the temperature and condition of the bees, which may be determined by watching, and when a few bees fall down and begin to crawl in a weak, stupid manner, and those still clustering appear to have shrunken, they may then be removed and placed in a hive supplied with empty comb or comb foundation. A little honey or syrup should be given them, when they will soon be out foraging again for themselves. I have not been able to see any difference between colonies so fasted, until the foul honey which they contain has been consumed, and an ordinary colony of similar size. Both seem to go to work with the determination which characterizes their race.

Some still say that this fasting-plan is a failure; but where that has been said, it cannot have been properly tried. As soon as the brood, which was left in the foul-broody hive with some bees, as directed, is hatched out, they should be treated like the others, the combs rendered into wax, and the hive and frames boiled in water for a few minutes.

The wax in the form of comb foundation may be inserted in the same and be ready in the purified hive to receive, with perfect safety, the former inmates as soon as their purification is complete. The honey in the foul-broody combs, if extracted and boiled for ten minutes, can be fed to bees without any fear of injurious results. Boiling will kill *only* the germs of the disease.

I have subjected foul-broody combs to a temperature of 35° below zero, and allowed them to freeze all winter, then placed one of them in a healthy nucleus, and as soon as it was filled with brood and commenced to hatch, I have found, at the first examination, a very large number of larvæ affected with foul brood. Frost will, therefore, not kill the disease.

Every case of foul brood which I have found in this part of Canada, I have never failed to cure at the first attempt. In fact, there are a great many bee-keepers in Canada, now, who no longer dread foul brood in their apiaries, as they used to, knowing that they can cure any colony in one or two hours.

We have had some valuable hints on foul brood, in the bee-papers, and also some sheer nonsense. Fine spun, scientific theories are sometimes good, but solid facts from extensive practical experience is what suits me the best.

As soon as I shall be able to find the time, it is my intention to write up more fully, a complete and exhaustive article, treating on this disease, its origin, and its cure, and by illustrations I hope to make it perfectly plain and clear, so that the disease may not be looked upon, as at present, by many, as an incurable one.

D. A. JONES.

Mr. Hall said that in 1875 he lost his whole apiary by foul brood. From his experience he believed it better to make a bonfire of hives, comb, and bees, than to attempt cleaning them.

Mr. Betsinger regretted that the time was too short for discussion. He knew the cause of foul brood, and a simple remedy for it, which he would state at the winter meeting of the Northeastern Bee-Keepers' Association.

President Root said that he should be inclined to leave the bee-business altogether, if he thought such another scourge of foul brood would ever be experienced as that which visited this country some years ago. It came mysteriously and mysteriously departed.

No reference was made to Mr. Cheshire's remedy, phenol, recently published so fully in the AMERICAN BEE JOURNAL.

The report of the committee on revision of the Constitution of the Society, which was not disposed of last evening, came up in the order of business, and was adopted, Messrs. W. F. Clarke and U. E. Dodge, with the permission of the Convention, withdrawing their amendment.

The programme committee reported a number of questions, which there was no time to discuss, and to most of which the committee had attached brief replies. They were as follows:

Question. Shall we use in the surplus department, sections of empty comb, when, from any cause, honey has been removed from the same?

Yes; especially in the spring, when the first sections are put on.

What is the best non-sticking substance to use in making foundation? Starch, made from rye flour.

Will the killing of drones early stop first swarming? No.

Should our section-boxes of honey be glassed? Four of the committee voted yes, one no.

What is the best package in which to ship extracted honey; and is it possible to get a practical wooden package which will not have to be boxed? Submitted to the Convention.

What is the best plan to get rid of fertile workers in a colony of bees? Carry each frame with the bees about 20 feet from the hive and shake them off on the ground. Put the frame back into the hive and give them a queen.

At what time should sections be placed on the hives? The bee-keeper must be the judge of that himself, as he has a knowledge of the honey-flow.

How late, as a general thing, will a queen become fertilized? As long as drones are around and the bees fly.

Is there any gas in honey which should be allowed to escape after extracting, before sealing it in jars? Probably some carbonic-acid gas, oxygen and hydrogen in the combined state of water, which is gotten rid of by evaporation.

What is bee-sting poison composed of, and is it an acid or alkali? Poison is composed of the liquid secretion of two glands—one secreting an acid liquid, the other secreting alkali liquid. The mixture is always strongly acid.

Shall we practice stimulative feeding before flowers bloom in the spring? Yes. No.

What is the best method of keeping combs over winter? Put them in a moth-proof room.

To obtain the best results from cellar-wintering, should bees be taken out for a cleansing flight during winter? Cannot say.

J. Thompson wished to get the views of the Convention on the latter point. Some said no, others yes. A vote was taken, but not "a baker's dozen" committed themselves one way or the other.

Mr. Wm. F. Clarke said: "Adopt my hibernating hive-stand and you will neither have to take them into or out of the cellar; and if there is a chance for a cleansing flight, the bees will take it.

The programme committee reported resolutions of thanks as follows:

To the Mayor and city authorities for their courtesy in placing the public buildings at the disposal of the Society.

To the daily papers, whose reporters have been very attentive and efficient.

To the brethren who prepared essays for the Convention.

To the President and officers for making preliminary arrangements, and for management of the business of the Society.

To the hotel-keepers for their polite attentions to members.

The committee on Mr. Bengough's claim on the Society for short-hand reporting at the last meeting, recommended settlement on Mr. Bengough's proposition submitted through Wm. F. Clarke, offering to take $25 for work already done, and hand over the short-hand notes to the Secretary of the Society, to be put on file. The report was adopted.

Several small bills were ordered paid, and the janitor, who had been at a large amount of trouble, and had been in constant attendance to look after warming, ventilating, and lighting the building, was voted $10 for his services.

The question was asked, whether any official report of this meeting would be published? President Root stated that the AMERICAN BEE JOURNAL had made arrangements to give a full report, and he presumed that Mr. Locke would have a report in his paper. It was not the intention to get out a report at the expense of the Society, but the Secretary of this meeting, Mr. Benedict, would write out the minutes which he had made, and transmit them to the newly appointed Secretary, who would produce them for reference at the Detroit meeting.

Mr. Clarke, of Ontario, said that this would entail a considerable amount of after-work upon Mr. Benedict, which it was not fair for us to expect him to do for nothing. He, therefore, moved that the Secretary be allowed $20 for his services. The motion was seconded and carried unanimously.

President Root gave a brief address expressive of his satisfaction at the success of the meeting. Though it was not so large as usual, owing to the absence of the Western brethren, it had been most harmonious, and there had been many interesting and useful discussions. He hoped that there would be a general rally at Detroit, next year.

The Convention then adjourned until the fall of 1885.

☞ The Mahoning Valley Bee-Keepers will hold their fall meeting in Ravenna, O., on Nov. 14, 1884. A cordial invitation is extended to all.

E. W. TURNER, *Sec.*
Newton Falls, O.

☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.

W. B. LAWRENCE, *Sec.*

☞ The bee-keepers of McDonough and adjoining counties are requested to meet at Bushnell, Ill., on Nov. 20, 1884, for the purpose of organizing a bee-keepers' association.

J. G. NORTON.

☞ The Massachusetts Bee-Keepers' Association will meet on Nov. 19, 1884, at 432 Southbridge Street, Worcester, Mass. All interested in bees are cordially invited.

J. G. JEFFERDS, *Sec.*
D. S. BASSETT, *Pres.*

A Distilling Insect.

Livingstone met with a wonderful distilling insect in Africa, on fig-trees. Seven or eight of the insects cluster round a spot on one of the smaller branches, and these keep up a constant distillation of a clear fluid-like water, which, dropping to the ground, forms a puddle. If a vessel is placed under them in the evening, it contains three or four pints of fluid in the morning.

To the question, whence is this fluid derived? the natives reply that the insects suck it out of the trees, and naturalists give the same answer. But Livingstone could never find any wound in the bark, or any proof whatever that the insect pierced it. Our common frog hopper, which, before it gets its wings, is called "cuckoo spit," and lives on many plants in a frothy, spittle-like fluid, is like the African insect, but is much smaller.

Livingstone considers that they derive much of their fluid by absorbing it from the air. He found some of the insects on a castor-oil plant, and he cut away about 20 inches of the bark between the insects and the tree, and destroyed all the vegetable tissue which carried the sap from the tree to the place where the insects were distilling. The distillation was then going on at the rate of one drop in every 67 seconds, or 5½ table-spoonfuls every 24 hours.

Next morning, although the supplies of sap were stopped, supposing them to come up from the ground, the fluid was increased to one drop every five seconds, or one pint in every 24 hours. He then cut the branch so much that it broke, but they still went on at the rate of one drop every five seconds; while another colony of the insects on a branch of the same tree, gave a drop every seventeen seconds.—*The World of Wonder.*

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts,; per doz., **40** cts; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

CORRESPONDENCE

For the American Bee Journal.

Depressed Industry—Organization.

R. J. KENDALL.⊙

The following article is from the *Anaheim Gazette*. It explains itself, and I will make a remark or two about it:

"One of the unfortunate features the present season is the depression under which the honey industry is laboring. For several years past the yield has been scant, and yet the price was, as a rule, below the point of profit. This season the crop was very good, but to offset this the price has gone down to a shameful depth. Sales of pure mountain sage honey are reported in Anaheim, this week, at 3 cents per pound, and he was a peculiarly bold operator who paid that price, 2¾ cents being the next highest offer. It is needless to say that even with the natural advantages enjoyed by the bee-keeper of Southern California, there is no profit in the business when such prices rule. And it is all the more exasperating to know that it is not a fluctuation in the consumption of honey which causes this low price. It is reasonable to suppose that the use of honey is steadily increasing, and more than keeps pace with the production. The real cause of the depression is to be found in the so-called honey with which the markets of the East and of Europe are flooded—honey in the production of which the 'busy bee' had neither hand nor part. It is glucose pure and simple, and as it can be produced cheaper than the natural product can be sent from California, the latter is unmarketable. Such, indeed, is the frank statement of a commission house of New York, who were asked by an Anaheim firm to give a reason why they would not handle pure California honey. Against such unscrupulous competition as this, it is almost useless to struggle. The only hope is in legislation, which will make it a punishable offense to sell glucose under a honey-label, just as it is an offense in some States to sell oleomargarine for anything but what it is. Until some such step as this is taken, there is nothing very alluring in the honey business."

I always believe that "to be forewarned is to be forearmed," provided the warned heed the warning. To me there are evident signs that the honey market is in peril so far as the pockets of honey-producers are concerned. They ought to be able to get 10 cents per pound for their honey, and when the price gets below that, I have very grave doubts whether it pays to produce it, the supply dealers to the contrary notwithstanding.

The honey crop is a precarious crop, and as "one swallow does not make a summer," so also one year of honey-glut does not make the honey business a substantial or paying one; and even when we do get the glut, the effect seems to be of injury to the business.

"Three cents a pound"—the words are a comment and a warning, a comment on the want of management, and a warning that unless bee-keepers turn their attention as well to the management of the market as to the management of their bees, they are going to be "worker bees" with a vengeance; and also to find that at the end of the season they have been so robbed of their honey that they will have to look for outside feeding to winter on. But unlike the bees they have no owner, and none to do the feeding.

What is the remedy? Undoubtedly co-operation and organization. If every skilled bee-keeper were a member of his district association, every district association affiliated to its State association, and every State association connected with a National association, such organization could control the honey market, arbitrate the price of honey, and see to its being evenly distributed. This could be done by holding regular "grange" sort of meetings, paying small lodge dues, having representatives, agents, correspondents, and a perfect ramification throughout the whole country. Such a society would be a perfect barometer of the honey trade, and would be its safeguard, or could be made so.

Suppose such an organization; suppose that it had its own trade-mark and label; suppose every pound of honey it sold was guaranteed to be honest, pure honey; suppose every member was a *bona fide*, expert honey-producer (I mean not a mere novice or amateur); and suppose membership meant knowledge of the business, and honesty in it; do you not suppose that such a brand of honey would knock "higher than a kite" this adulteration and every other brand? If instead of every man shipping on his own hook, he would send his honey to his district association bottling, canning and packing house (where honey was tested and graded), would not a system of this sort, or something like it, be the best answer to cheap prices, and the glucose business.

I am afraid we think too much of managing our bees, and too little of managing our market. If we are to be successful we must give as much thought to the latter as the former. Honey will not sell itself, but if left to do so, it will sell us. I wish that those readers of the BEE JOURNAL who have more and longer experience would determine to take up this branch of the business and let us see if we cannot evolve some scheme to better our present positions, and become the masters of the honey market, and not its victims.

Austin, Texas.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

For the American Bee Journal.

N. Ind. and S. Mich. Convention.

The first regular meeting of the N. Indiana and S. Michigan Bee-Keepers' Association met at 10 a. m. in Goshen, Ind., on October 3, 1884, and was called to order by President A. Blunt, who briefly stated the object of the meeting. The first on the programme was the reading of the minutes of the previous meeting which were adopted. The roll was then called, when 15 members responded. An opportunity being then offered for any person to join the Association, by signing the constitution and by-laws, 6 new members were received. The number of colonies owned by the new members were 152, making 975 in all belonging to the Association. This does not include the increase of the new colonies belonging to the old members, as they could not give the number that were strong enough to winter. The Association favored the doubling up of weak colonies for wintering, instead of feeding them.

A general report was then called for by the President and the members responded promptly. It would be useless to attempt to give a full report of everything that was spoken. The facts are all that will interest any one, and they were: 1. That this has been a remarkably poor season for bee-keepers in this section, owing to the extreme dryness of the weather. 2. That the production of honey is far below the average and inferior in quality. 3. That many colonies are unable to winter without assistance. 4. The best food to supply them with is the best granulated sugar, dissolved in sufficient water to make a thick syrup, and to be fed in the hive, by filling empty combs and replacing them, or by the various other methods. A good and convenient way is, by filling a tumbler nearly full and placing it upside down in one end of the hive, and admitting the bees by raising one division-board. The only difficulty experienced by feeding syrup was from diarrhœa, caused by the sugar. This was also produced sometimes by bees eating soured or moldy honey. The best means of preventing this disease has been found to be some alkali, as bi-carbonate of soda, one tablespoonful to each gallon of syrup.

The discussion then turned on the best method of preparing bees for winter, after which the meeting adjourned until 1 p. m.

Promptly at 1 p. m., the meeting was called to order by the President, and the discussion continued on wintering bees. By the suggestion of A. Blunt, the physical condition of bees during winter, was added. This was: 1. Ventilation and the amount of air necessary for bees. 2. How this air should be admitted. 3. How to prevent moisture.

These subjects were discussed for some time, and the following resolutions unanimously passed:

Resolved, That regular and continued heat with dryness are the essentials in keeping bees during winter; therefore, this Association recommends the packing of the hives at each end and at the top, with absorbents, such as wheat-chaff or leaves; and ventilation from the entrance only, with room above the honey-board for the bees to pass over the combs, and for shelter, only covering sufficient to keep them dry and from the direct blasts of the storms.

A vote of thanks was tendered the La Porte Bee-Keepers' Association, for the kind invitation extended to our Association, to be with them on Oct. 22, and a delegate was ordered to be sent to represent our Association at that time.

The executive committee was directed to procure Mr. James Heddon, of Michigan, and Mr. Newman, of Chicago, Ill., as speakers for our next meeting.

Adjourned to meet on the first Friday of April, 1885, at 10 a. m., in the same room. F. L. Putt, M. D., *Sec.*
A. Blunt, *Pres.*

For the American Bee Journal.

How to Feed Sugar Syrup to Bees.

C. THEILMANN.

This fall I have fed my bees for winter stores 900 pounds of granulated sugar syrup in two days. I fed it as described last year by one of the correspondents in the Bee Journal; *i. e.*, by raising the front of the hive high enough so that the syrup, which is poured in on top of the back end of the frames, does not run out. When I read the article, last year, I did not think much of that way of feeding bees, as I feared that the bees might bedaub themselves too much; but I find by actual trial that the bees take up the syrup in a shorter time than in any other way that I have ever tried to feed them; but very few daubed bees can be seen at the entrance, and it is otherwise all right, no excitement for robbing has appeared.

Theilmanton, Minn., Oct. 30, 1884.

Read at the Wabash Co., Ind., Convention.

Feeding Bees.

A. SINGER.

The first question which I will notice is, "Why do we feed bees?" There are several reasons why the progressive bee-keeper will feed his bees. 1. In the spring, when no nectar is to be found, we should feed the bees in order to stimulate breeding, as it is of great importance to have all colonies strong as early as possible in the spring, so that they may be prepared to improve the first honey-flow. We are all aware that the queen is stimulated to greater activity in depositing eggs when the workers are carrying in food (which we may give by stimulative feeding), than when they get nothing from the fields.

2. When the flow of nectar has not been sufficient to enable the bees to store enough honey for a winter supply, then it becomes necessary to supply enough stores for them to feed on during the winter, which stores should be capped over before cold weather sets in.

3. This fall, I intend to try an experiment with something with which, perhaps, some of you are annoyed. My bees have access to a cider-mill which is located within one-quarter of a mile from my apiary. Daily the bees make visits to the mill in search of food, and when there is no honey coming in, as has been the case during this fall, the bees will carry in great quantities of cider, which we all know is not fit for their winter stores. Then the question arises, "What shall we do to overcome this difficulty?" I am trying the plan of feeding, as an experiment, and gladly await a discussion of this point at this meeting.

I feed my bees in the morning, so that they may have something else to do during the day than going after cider. I find that many bees are thus deterred from going to the mill, as I have furnished them work nearer home.

I believe that where no great amount of cider is in the hive, if we mix a quantity of honey or syrup with it, it will sweeten it so much that when the water is properly evaporated from both, fermentation will not take place; at least not to any great extent. I am not certain of success, but I can report the result of my experiments at our spring meeting, and you can then be the judges.

The advantages of feeding bees are of some importance to any who have either few or many bees. As to the manner of feeding bees, I may say that each has his own method. The result desired should determine the manner of feeding. If we desire to stimulate breeding in the spring, we need not feed a large amount; a piece of old comb put into the cap of the hive will serve to hold enough syrup for the puspose. But when we desire to feed for winter stores we would need something more commodious. I have used Shuck's bee-feeder, and find it excellent for feeding small quantities at night. It is used at the entrance, and would, therefore, be objectionable if it were desirable to have the bees fly out during the day. I am using tin cups for heavy feeding. I make a little wheel out of a shingle or thin board that will fit inside the cup, leaving a little space around the edge where the bees may sip. This may be bored full of small gimlet holes, and serves as a float, settling as the syrup is consumed. This I find to be the cheapest feeder that I have seen. I notice some objections to it, though, as the bees become besmeared sometimes, and are unable to help themselves for a short time, but others come to their rescue, and they are thus relieved.

The question now arises, "What shall I feed my bees?" 1. Honey, if it is fit for table use; if not, Prof. Cook says that it is not fit for bees.

2. Sugar syrup made the consistency of honey when first gathered.

3. Coffee A sugar is considered the best to use in making a syrup. I would never use cheap sugar for winter feeding.

For stimulative feeding in the spring, before any pollen comes in, I have used Graham flour and also bolted flour. I put it on boards in front of the hives. This serves as a substitute for pollen, and I find that the bees work at it with a will on warm spring days.

Now, as to the amount to feed: I have nothing to offer in particular, but I would say, if you expect to extract from the brood-chamber, do not feed more syrup than the bees will be likely to use up before the honey-flow comes, as the surplus of syrup will spoil the sale of honey, and customers will say that it is adulterated.

Great care must be exercised in feeding syrup during a honey-drouth when sections are in place for surplus honey, as no syrup whatever should be deposited in comb honey for market. Let our motto be: "Build up the market for pure goods only."

I am often confronted with this question from customers: "What makes your honey go to sugar. (They mean granulate.) I always explain to them that this is one of the tests of its purity; and I believe that it will be a benefit to all if each will do the same thing towards educating the public so as to be able to recognize pure honey.

Some persons say that the honey can all be extracted and sold in the fall, and with that money enough sugar can be bought to winter their bees on, yet having a fair sum left to pay them for their trouble. I am not inclined to think that there would be anything gained in doing this, as it is considerable trouble to melt the sugar and distribute the feed.

Feeding late in the season should not be done if possible to avoid it, as it encourages breeding, and the cold weather approaching, the bees are driven to cluster, and the brood left to chill. If the cold continues, the bees cannot remove the dead brood, and it is left in the hive all winter in a decaying state, from which arise odors and gasses which bring disease and death to the rest of the colony.

In feeding at any time, great precaution should be exercised against robbing, which, when once started, is sometimes hard to stop. No syrup, sugar or honey should be dropped about the apiary, or exposed where the bees will find it, as these are great incentives to robbing. If we feed at night we need not have any fears of robbing, if the above precautions are well observed. Feeding at night can only be done while the nights are warm; for when the nights become cool, the bees will not carry the food to their cells, as they are all needed in the brood-chamber during cool nights, therefore the necessity of early, fall feeding for winter stores. Early in the fall each colony should be examined to see whether it is lacking anything, and then a remedy can be given accordingly.

In conclusion I will say this: Each person who keeps bees either for profit or for pleasure, should obtain some reliable authority on the subject, and then read it carefully and make as many observations as possible to attest his reading. If each were to do this it would put us to thinking on the subject, and by hard thought all our inventions and improvements are brought about, and mankind is thereby benefitted. Keep thinking as Galileo did when he saw the chandelier swinging to and fro at Pisa. His thoughts gave us the pendulum; your thoughts may give us something as beneficial. Improve the evenings by reading bee-literature.

No time is lost by the "busy bee,"
In running its daily train;
From the rising sun till dewy eve,
It treasures its honest gain.

For the American Bee Journal.

Will Honey-Dew Granulate?

HENRY JONES.⊙

The best report that I have ever made is the following: Last fall I put 50 colonies of bees into winter quarters. Eight of them died, I sold 6, and began the season with 36 good colonies. From these I have taken 3,546 pounds of comb honey and 210 pounds of extracted. This is not an estimate, but all of it was carefully weighed. I now have 78 colonies with which to try the coming winter. I winter my bees on the summer stands and pack them with dry sawdust. Will honey-dew, or the product of aphidæ, granulate? I had the impression that it would not, but some honey which I extracted on June 5 granulated solidly before July 1. Nearly all who tasted it pronounced it honey-dew.

Chesaning, Mich., Oct. 31, 1884.

[Prof. Cook's reply to the above inquiry on the granulation of honey-dew is as follows: "So far as I have been able to determine, the better kind of honey-dew (that from aphidæ and ergot) is quick to granulate; that which I have from bark-lice shows a tendency to solidify."—Ed.]

For the American Bee Journal.

Apiarian Display at New Orleans.

H. BESSE, M. D.⊙

I am appointed Assistant Commissioner for Ohio to represent and arrange the apiarian display at New Orleans. The exhibition will not be large, but I shall aim to show the most instructive articles, such as hives, honey-packages for surplus honey in all forms to ship and in the market; and all kinds of apparatus and material used or produced in the apiary. I am given but a small amount for this object, and will, therefore, have to limit the exhibit to the practically useful. If any bee-keeper, or any one in the supply business, thinks that he has that which will be instructive, and is new and peculiar, I shall be glad to hear from him at once. Any articles donated will be arranged in the most tasteful manner. (This will give an excellent opportunity to advertise goods.) Those desiring to loan them goods for the Exposition (and this is urgently requested) will send all articles to my address at Delaware, O., I paying the express or freight charges. All desiring to respond to this call please do so at once, as all articles must be sent to me by Nov. 20, 1884.

Delaware, O.

For the American Bee Journal.

Southern Wisconsin Convention.

The fourth regular meeting of the Southern Wisconsin Bee-Keepers' Association was held on Oct. 28, 1884, at Janesville, Wis., President C. O. Shannon presiding.

After the reading of the minutes of the previous meeting by the Secretary, Mr. Levi Fatzinger read an essay on the "Advancement in Apiculture," commenting on the benefit of organized associations, the improvements made in handling bees since the days of the old log-hive, the value of the pioneers in bee-keeping, and the various experiences through success and failure.

The different methods of wintering bees was discussed at some length. Wintering in the cellar was first considered with the following conclusions: It is most important to have a dry cellar and sub-earth ventilation with a constant temperature of about 45° above zero. The hive-stand should be one foot high. Place the hives in rows and in three or four tiers high. The caps should be removed, and the honey-board shoved forward ¼ of an inch for ventilation. Keep the room dark, and handle as little as possible. The bees should not be put into the cellar until the cold weather comes to stay. Their food must consist of the best honey or granulated white sugar made into a thin syrup. All dead bees should be removed from the bottom of the hive.

Wintering bees out-of-doors, the hives being packed in chaff, was next considered, and was generally admitted as the best method. Build a house large enough to allow a packing of five or ten inches thick around each hive. Arrange the hives in rows facing to the south. The entrance must be left open so that the bees can pass out and in at will. Ventilation must be provided at the top of each hive so that the moisture will be absorbed by the packing. Do not put the bees into winter quarters until the warm days are past, otherwise the bees will return to their old stand and be lost. The entrance should be kept clean from dead bees. The great advantages of wintering out-doors are: The bees can take a cleansing flight on warm days (it being necessary to scatter straw in front of the house for the weak ones to light upon). Also, they may be left in winter quarters until frosty nights are gone in the spring, thus saving much spring dwindling.

The exhibit of apiarian supplies was better than at any previous meeting. A case holding 24 one-pound sections, made for tiering up, and so arranged that the bees could not soil the outside of the sections, was considered the best for the purpose. A patented bee-smoker was shown and highly recommended.

A novel queen-nursery attracted considerable attention. It consisted of a block of wood 1¼ inches thick and 3 inches square, having a 2-inch hole in the centre, covered with fine wire-cloth. In the end were two ½-inch holes connecting with the large one. A queen-cell is placed into one of the holes, and a sponge saturated with honey into the other. Any number of these may be put into a brood-frame and placed into the centre of the hive to be hatched.

A reversible frame was shown. It is the ordinary frame except the support or projection of the top-bar was cut away and supplied with strap-irons fastened at the centre of the end-pieces with a screw, and reaching to the top. Here it is bent over and back and terminating in two points. These irons may be turned to either the top or bottom of the frame. The frame may be hung bottom upward in the hive; the bees will then carry the honey into the upper story, leaving the entire brood-chamber for the queen.

Hints and suggestions were made as follows: A colony may be placed on its own stand or any other in the spring. Hives should be numbered so that a record of each colony may be kept. To insure the successful wintering of bees, honey-dew and buckwheat honey should be extracted in the fall, and replaced with the best sugar syrup. The weight of a colony of bees is from 3 to 5 pounds. It is the common opinion that extracted honey changes its flavor, and is not equal to comb honey. It is claimed that some people do not know the difference between extracted and strained honey. Extracted honey is pure, and is extracted from the combs by a machine made expressly for the purpose; strained honey is comb honey mashed up with bee-bread, beeswax, bee-glue, and the dirt of the hive.

We give below the statistics for 1884, which we regret to say is incomplete, many members failing to report:

Colonies put into winter quarters	286
Colonies taken out of winter quarters	283
Colonies lost by robbing and spring dwindling	24
Colonies sold	25
Colonies bought	27
Colonies commenced the season with	269
Increase of the season	209
Comb honey produced	9,256
Extracted honey produced	3,722
Wax produced	63

The investment may be estimated as follows:

269 spring colonies at $8 each	$2,152
209 fall colonies at $6 each	1,254
Total	$3,406

The product is as follows:

9,256 lbs. of comb honey at 16 cents	$1,480 96
3.722 lbs. of extracted honey at 12 cents.	465 25
63 lbs. of wax at 26 cents	16 38
Total	$1,962 59

From the above it will be seen the profit is over 55 per cent. Had our table been complete, we could have made a better show of figures. The next meeting will be held at the usual place in Janesville, on Jan. 6, 1885.

Mr. J. C. Lynch will read an essay on apiculture. A general discussion will be indulged in on the subjects of bee-culture. J. T. Pomeroy, *Sec.*
C. O. Shannon, *Pres.*

For the American Bee Journal.

How Shall we Winter Bees?

J. E. POND, JR.

The winter problem is *the* important matter in the minds of apiarists at the present time. All others sink into insignificance when compared with it, and with good reasons too; for other questions are easy of solutions, or depend upon whims or fancies, while this one stares us in the face, as one that affects the very life of the bee-business. If a sure method can be given by which every colony can be wintered safely, the occupation of bee-keeping will be placed upon a solid basis, and stand there permanently; as the matter now stands, great insecurity is felt by all in regard to the method which they advise and use themselves; for while they may have been uniformly successful heretofore, no one can predict what the results in the future will be. The ablest and most experienced are forced from time to time to report large losses, which would not be the case were there any positively certain method which they can use.

Mr. Heddon, to-day, is sure that he has the question settled, and fully believes that *his* "pollen theory" is the solution of the problem. Perhaps he is right; it is possible he may be; I for one, however, cannot accept that theory, and fear that Mr. H., in placing too much present dependence upon it, may be prevented from giving the matter that attention which he otherwise would, and thus a loss will ensue, by reason of his ceasing to experiment.

While I do not accept the "pollen theory," there is one point incidentally made by Mr. H. in discussing it, viz: that if a colony is fed upon granulated sugar syrup only, and all pollen is removed from the hive on the approach of winter, that such colony will invariably winter safely. Now, if such is the case, there is an easy remedy for us all to adopt, and we need not bother our heads at present about the prime cause or immediate effect; it is enough for present purposes to know that safety lies in pursuing a certain course; and when it is established as a positive fact, we can all pursue that course in perfect confidence of the results which will follow.

It is easy enough to make assertions in regard to almost any matter; and where the matter is wholly theoretical it is not easy to disprove assertions, no matter how much they are at variance with our preconceived ideas. In this matter of wintering, however, we have now a chance to prove or disprove one thing, viz: whether the absence of pollen, and the presence of sugar syrup alone, in a given colony, will insure its safety during the coming winter. If it does so, and in a sufficient number of cases in different localities, to as nearly prove the rule correct as is possible, why have we not got the remedy, even if we do differ as to the cause of the disease? The science of medicine is one of experiment largely; so with bee-keeping; and he who experiments the most wisely is the one who will meet with the greatest success.

The main point which we are now after, is to get our bees safely through our severe winters. If a certain means is offered by which it can be done, we can well afford to accept it, even if we do not admit the soundness of the theory upon which it is based. The matter is well worth a trial. It certainly can do no harm, and if good results follow, we are all benefitted thereby. And then, too, in accepting the remedy, we need none of us give up our peculiar views or notions; we can still theorize and experiment as to the cause, and do so with the certainty of meeting with no losses, while thus theorizing. I for one shall give the matter a test for the coming winter, and I trust that enough of my fellow bee-keepers in various localities will do so also, to show whether we can with perfect safety adopt sugar syrup for winter stores.

Foxboro, Mass.

Lake Shore Bee Convention.

The September meeting of the Lake Shore Bee-Keepers' Association was held at Brocton, N. Y., but there was a meager attendance.

The subject of wintering bees was discussed as follows:

Mr. Gage said: Sometime in October I remove the honey-board and lay on a few thicknesses of newspaper or a carpet, and on the top of this I place a chaff-cushion about 4 inches in thickness, for an absorbent more than for protection. The entrances to my hives are about 7 inches wide. These I close up to about 2 inches. The most I ever lost in any winter, was 3 colonies. I have wintered 63, or near that number, at times.

Mr. U. E. Dodge: I generally pack the bees by the last of November. I pack them in a day when it is warm, so that stray bees will easily get back to the hive again. Packing is only one of the items for winter preparation. I commence in September to inspect my bees carefully, and aid each colony for wintering according to the condition in which it is found at that time. If I have a surplus of honey in one hive, I often take a part of it away and give to one that is deficient. But I do not advocate this method in general practice. I save quite a good supply through the summer for extra fall and winter feeding. Be very careful in feeding, or robbing will commence. If it does, look out for trouble that may be lasting. It disorganizes a whole apiary when robbing commences. I do not allow a drop of honey to be spilled near the hives, or a bit of comb where the bees can reach to excite their appetites. We cannot be too careful in this direction. If a drop of honey is seen on the alighting-board, I wipe it off at once. Bees have guards at the entrances of hives, and if not demoralized by carelessness, they will protect themselves from foreign invaders that come for pelf in their natural way.

Mr. Hall: I consider myself under lasting obligations to this Society for what knowledge I have obtained in these mutual gatherings.

Mr. Rossiter: I have followed Mr. Bolling's plan of wintering, and had perfect success.

Mr. Dodge: I leave the entrances open all winter. If any get drifted under, I let them alone. They come out generally the best in the spring.

Mr. Hall said that Mr. Moon covers his hives with snow in the early part of the winter, for protection.

Mr. Dodge: Although we speak favorably of snow-drift covering and scientific packing, my conclusion is that a properly constructed cellar is the only true safe-guard for the wintering of bees.

Adjourned to meet at Fredonia, N. Y., on Dec. 6.

SELECTIONS FROM OUR LETTER BOX

Handling Bees Scientifically.

I commenced the season of 1884 with 26 weak colonies, 15 being Italians, and the balance blacks. I doubled them back to 15 colonies, killing all the black queens, and have taken 1,300 pounds of extracted honey, sold $7 worth of queens, and have increased them to 25 colonies. My neighbors who handle bees scientifically have succeeded very well, but those who did not, have no honey for their pains.

Geo. W. Morris.

Salvisa, Ky., Oct. 28, 1884.

Bees Ready for Winter.

I began the season with 35 colonies, spring count, sold 13, and increased the balance to 39 by natural swarming. My surplus is 500 pounds of comb honey in one and two-pound sections, and 600 pounds of extracted honey. My bees are in first-class condition for winter, and all are ready to remove into winter quarters when cold weather sets in. All have ample stores well sealed to last until May, 1885. Here, this has been a fair season for honey. Last winter I wintered 3 colonies on the summer stand, with no protection except a quilt over the frames, resting on sticks, so as to give room for the bees to partially cluster above the frames, and so that the bees could move in a body to any part of the hive and not get chilled. The super was resting on a quilt filled with oat chaff, and the covers were raised ¼ of an inch to allow the moisture to escape. These 3 colonies wintered the best of any. I shall experiment farther during the coming winter. C. F. Greening.

Grand Meadow, Minn., Nov. 5, 1884.

No Fall Honey Crop.

I started in the spring with 6 colonies of bees, increased to 16 by division, and have taken 195 pounds of extracted, and 165 pounds of comb honey. I had to feed 95 pounds of sugar in order to bring my bees through the last winter. It has been a very poor season here. Bees have gathered no honey since July 15. I have done better than the most of the bee-keepers, the average being, as near as I can find out, from 15 to 30 pounds per colony, with no swarming to amount to anything.

H. L. WELLS.⊸
Defiance, O., Oct. 28, 1884.

Northwestern Convention.

In the report of the Northwestern Convention, on page 678, second column and second paragraph, the last word in the paragraph should be *frames*, not *combs*. Page 679, second column, seventh paragraph and third line, *evening* should be *covering*. Mr. J. A. Green writes me that he has *not* practiced the Heddon method of preventing after-swarming, nor the "tiering-up" of sections, and thinks it probable that I "confounded him with Mr. Furness, of Indiana."

W. Z. HUTCHINSON.♂68—108.
Rogersville, Mich., Nov. 3, 1884.

A Very Poor Season.

This has been a very poor season for honey in this section. But few bee-keepers have secured any honey at all. Nevertheless bees swarmed a great deal, and I think that most of the colonies will starve before spring, unless they are fed. There was an extra good crop of white clover, and colonies which were in just the right condition, gathered honey rapidly for a few days, when the honey-flow ceased almost entirely. There was but little honey in any of the fall flowers. Last fall I had about 195 colonies; I lost 5 weak ones during the winter, doubled the balance down to 165 in the spring, and increased them to 192, besides taking 1,500 lbs. of comb and 1,600 lbs. of extracted honey.

J. M. VALENTINE.♀
Carlinville, Ill., Oct. 29, 1884.

Tiering-up Sections.

Here in Minnesota we cannot tier-up sections and get them capped so that we can use only one tier. Now, which are the best side-sections to use, and how shall we use them in order to have them ready to take off at one time? The 5¼x6¼ section is too large, and the 4¼x4¼ is too small for one tier, for the case will not hold enough. I believe that a section 4¼x5¼ and 7 to the foot is the best size. To get them all capped at one time, we must have a case made of such a shape that the sections will come out easily, so that when the centre ones are capped we can put them at the sides, and move the outside ones to the centre. We need to know what would be the best case for this purpose. If I can get 35 pounds of capped comb honey from every colony, I shall be well pleased. Out of 1,000 sections I had 500 capped on the tiering-up plan. I believe that the pure blacks or German bees are the best bees in America for producing comb honey, but they have two faults. My bees were bringing in pollen on Oct. 19, and I put them into the cellar on the 27th. I hived 2 second-swarms and they did as well as any. I returned about 30 first-swarms. I began the season with 48 colonies, spring count, have secured 400 pounds of comb and 1,300 pounds of extracted honey, being a little more than 35 pounds per colony, and have increased my apiary to 80 colonies. I believe that dampness is the cause of bee-diarrhœa.

FAYETTE LEE.⊙
Cokato, Minn., Nov. 1, 1884.

Much Bloom, but Little Honey.

Last winter bees wintered well in hives properly prepared. The spring and the whole season was good as far as rain, heat, wind, etc., are concerned, but although we had a profusion of bloom, it yielded but very little honey. White clover did well, but it is not yet well grounded in this country, still it is coming very fast, and will be a great help. Fall bloom produces our main crop. My hives had 10 pounds of honey, and I have fed 10 pounds of thick syrup to each colony. They have very little pollen, so that I think they are safe for winter. I use chaff-hives. Bees fly 3 days during every week. My comb honey in sections received the first premium at our County Fair (Nodaway Co.) I am doing all that I can for the bee-business here.

JNO. C. STEWART.⊸
Hopkins, Mo., Nov. 4, 1884.

Report for the Season.

My honey crop for this season is short. I commenced in the spring with 160 colonies, and increased them 90 per cent. by natural swarming and building up nuclei to full colonies. I have taken 3,000 pounds of extracted, but no comb honey. From the sale of bees, queens and honey, I have realized about $500. In this locality I have never seen two good seasons in succession, but never an entire failure. Linden and wild china yielded very little honey this season. They only yield well every other season. The bees have been gathering honey from goldenrod during the past four weeks, and are still working on it. I will extract some yet. I have been busy doubling up colonies, and I now have 200 in first-class condition. My method is to make 4 or 5 colonies queenless on one day, and on the next evening, a little before sunset, I take a queenless colony to the one with which I wish to unite it, smoke both well, take a few frames from a stationary hive, fill them up with the queenless one, put on an upper story, put in the balance of the frames, sprinkle them well with sugar water, close them up, smoke in the remaining bees, and then I am ready for the next one. I have had but one to quarrel, and that did not amount to much, and very few bees have returned to the old stand. I have now, in my honey-house, two Langstroth frames of honey which weigh 27 pounds. Who can beat it? I took from one hive, last season, 7 frames from which I extracted 59 pounds of honey. It takes about 15 pounds of honey to winter each colony here. My hives now will average about 30 pounds of honey. My plan is to let them have plenty of honey in the hive during winter, and then extract the surplus in the spring. Our bees stop working about Nov. 15, and commence again on Feb. 1. We scarcely ever have more than 4 or 5 days at a time when bees do not fly out. I have plenty of drones flying now.

J. W. ECKMAN.⟜
Richmond, Tex., Nov. 1, 1884.

Bee-Keeping in Canada.

I started bee-keeping in 1883 with 2 colonies of black bees in box-hives. These I increased to 8 by natural swarming. I put some of the swarms into hives holding 12 Gallup frames, letting them build comb as they liked, and the balance I put into common boxes. I transferred one of the old colonies in August, and obtained about 25 pounds of honey from it. This was the amount of my honey crop for 1883, although a good season. I put them into winter quarters with very scanty stores, the 6 new colonies having not more than 100 pounds of honey altogether. I wintered 3 colonies out-doors, packed in straw, and 5 in the cellar. One of those outside starved to death, and 2 of those in the cellar; thus leaving me but 5 weak colonies to commence this season with. The cause of my loss was neglect to feed them a little syrup last fall. I would also have lost another had I not fed it some syrup in the cellar, which did not seem to injure it in the least. Although those out-doors seemed to suffer most from bee-diarrhœa, they built up much faster in the spring, and gathered nearly double as much honey as the others. I transferred my bees early in the spring, and then during the honey-flow I extracted over 800 pounds of No. 1 honey from these 5 colonies and their increase (1 swarm and 3 nuclei). I consider this an extra good yield for this season, for I only used 3 or 4 pounds of comb foundation. I also made my own extractor, the material for it costing me just 45 cents. This fall I obtained 5 colonies from bee-keepers near me, who were going to brimstone their bees. I built up my nuclei into full colonies, and formed two new ones, so that I now have 11 colonies in all. I have my bees nearly all prepared for winter, some with all honey, and some with nearly all sugar syrup; some I will put into the cellar, and some into clamps out-doors. I know from the past season's work that spring feeding and good spring protection pays well.

WM. JNO. HINCHEY.
Tamworth, Ont., Nov. 1, 1884.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Placing Separators.

Will Mr. Heddon please explain the best and most economical way to place separators in his super? also, how best to do away with the cross-supports and take up the room at the ends of the supers, if cross-supports are abandoned and separators adopted?

CHARLES MITCHELL.
Molesworth, Ont.

ANSWER.—I have never been able, nor has any one else so far as heard from, to do away with the cross-partitions of my case or super, and yet have a good practical case left. With these cross-partitions we have a very strong yet light super or case free from complication or great expense, yet very solid and durable. I think I have now found a practical separator for the case just as we use it, who do not use separators. It will consist of a thin wooden separator the size of the section used, and not much thicker than tin; we will scant the sections just a trifle to take the separator, and make the bottoms and tops of the sections fully ⅜ of an inch narrower than the ends, so that when the separators extend flush to the top and bottom of the section, there will be free passage room for the workers. There will never be any trouble with extended cells above or below the separators. Those who may wish can hollow the separators a little, but I prefer them square. I think these separators can be purchased at less than one-fourth the price of tin ones. A friend has kindly sent me the material, as he uses it, and it has proven a success with him, and looks practical to me.

Was It Foul Brood?

Will Mr. Heddon please explain and answer the following questions: I had a colony of bees, this fall, which I think had the foul brood. When I examined them for winter, to see how much food they had, I did not discover it; but about four days later when I had fed them about six pounds of sugar syrup, I smelled an awful stench from the hive, both at the top and at the entrance. I opened the hive and found every indication of the disease from what I can learn from bee-books and from the BEE JOURNAL. I was very careful with it, shut up the hive, and when there were no bees flying from the other hives, I removed the honey board and placed a pan of sulphur in the hive and killed the bees. I then buried the bees and combs, put the hive out of the reach of other bees, and disinfected it with carbolic acid. First, Is it necessary for the acid to come in *actual contact* with every part of the hive in order to disinfect it? Second, Do you think that if 4 ounces of sulphur were burned in a closed hive, after removing the bees, it would disinfect it?

H. W. ROOP. ♁
Nashville, Tenn., Oct. 30, 1884.

ANSWERS.—Having never seen a colony affected with this dread disease, which seems so common of late, you will, no doubt, be as good a judge whether your colonies have it or not, as I would be. If they have it, it seems strange that it could develop so fast in "four days." There must be some mistake here, if it *is* foul brood.

1. Yes.

2. I think there would be danger in depending on the sulphur. Hot water (boiling hot) brought for a few moments in contact with every part of the hive and fixtures, will surely disinfect it, and is what I advise you to use.

Moving An Apiary.

I winter my bees in a cellar. Can I slightly change the location of the hives when I set them out next spring? I would like to change them from their present location, say 30 to 40 feet; how shall I manage the matter? I practice Heddon's method of preventing increase. One first-swarm cast a swarm, however, but I saw my mistake after it was too late to remedy the evil: viz. want of surplus room in which to store honey. I had not removed the honey-board. They were only 8 days old, but they had filled 10 frames full. I had failed to appreciate their industry, but frames will not catch me napping again.

T. F. KINSEL. ♁
Shiloh, O., Oct. 31, 1884.

ANSWER.—Certainly you can; and you will find an answer as to the "How" which we advise to arrange conditions, in an answer to the same question, by another, on page 701 in No. 44.

Preventing Granulation in Honey.

In Alley's Queen-Rearing he says Mr. L. C. Root has a method of preventing extracted honey from granulation, and advises a trial; but he does not give the method. Will Mr. Heddon kindly give the method in the BEE JOURNAL?

W. JOHNSON & CO.
Kingston, Ont., Oct. 38, 1884.

ANSWER.—There are various ways to keep liquid honey from granulating. The addition of acids will do it. Heating will tend to do it. To make either of these processes effectual, the honey will thereby be injured. So far as I know, there is no practical way, and by "practical" I mean any known method which is not more trouble or damage than to let the honey grain and then return it to the liquid state by the indirect heat process. When it is sold to a customer the package should be labeled with a label containing explicit directions for returning granulated honey to the liquid state.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a.m., Nov. 10, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—Nothing stirring in the market for the last few weeks. The approach of cooler weather is expected to impart more life to the trade. Comb honey sells at 16c. in the jobbing way, and brings 14@15c on arrival for choice. Offerings exceed the demand. Extracted honey has commenced to accumulate, but demand is fair for small packages for table-use, as well as for darker grades in barrels. It brings 6@9c. on arrival.

BEESWAX Is dull at 26@28c on arrival.

C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—As we have alresdy commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-lb, 18@20c., 2-lb, 16@18c.; fair to good, 1 and 2-lb, 14@16c.; fancy buckwheat, 1-lb, 12½@13c., 2-lb, 11½@12c.; ordinary grades of dark, 1 and 2-lb, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCAUL & HILDRETH, 34 Hudson St.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—Good to choice qualities are selling slowly, mostly in a jobbing way. Inferior grades are neglected. The market is weak at the quotations. A sale of 100 cases extracted, mostly choice white, was made at 4¼c. One hundred tons extracted, barrels and cases, are going aboard ship for Liverpool. White to extra white comb, 9@10c; dark to good, 6@8c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 24@27c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

GEO. W. MEADE & CO., 213 Market.

KANSAS CITY.

HONEY.—The market is quiet and unchanged, with good demand and liberal receipts. Comb, ½-lb. sections, none in the market. They would bring 18c.; 1-lbs., 14@15c.; 2lbs., 13@14c. The above figures are for choice stock in regular shipping crates. Dark or large combs in rough crates sell slowly at 9 to 10c. Extracted, California, 6@7c.; white clover, 7@8c.; Southern, 5½@6c.

BEESWAX.—None in the market.

CLEMONS, CLOON & CO.
Successors to Jerome Twichell.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

* * *

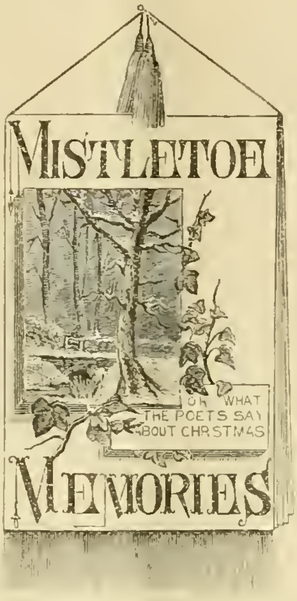
☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

* * *

"The Mysteries of Marseilles; or, The Loves of Blanche and Phillippe," by the author of "Nana," is an intense love story, overflowing with excitement and absorbing interest from beginning to end, while it bristles with the spiciest of details put in Zola's best and most effective manner. It is published in a large, square, duodecimo volume, paper cover, uniform with "Nana," and "L'Assommoir," price fifty cents, and will be found for sale by all Booksellers and News Agents and on all Railroad Trains everywhere, or copies of it will be sent to any one, to any place, postpaid, on remitting fifty cents in a letter to the Publishers, T. B. Peterson & Brothers, Philadelphia, Pa.

A Christmas Present.

To every person who sends us one NEW subscription, (besides his own renewal), for one year, for the Weekly BEE JOURNAL, or 4 NEW Monthly subscribers, for a year, we will send as a present, by mail, postpaid, a copy of "Mistletoe Memories, or What the Poets say about Christmas."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OR WHAT THE POETS SAY ABOUT CHRSTMAS
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It comprises a collection of poems selected from the writings of H. W. Longfellow, J. G. Whittier, Thomas Hood, Alfred Domett, Chas. Mackay, Sir Walter Scott, Jennie Joy, and others. The whole bound in Banner shape, with rich silk fringe and tassels. For presentation, this art souvenir is vastly superior to a mere Christmas card, as it combines the advantages of both art and literature. Size, 4 by 6½ inches.

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All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
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The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

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☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

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☞ The "United States Democrat," published weekly at 171 Broadway, New York, at $2 a year, is a first-class Democratic weekly publication. Ten copies one year for $16.00 and one copy extra to the getter up of the club. It is edited by Mark M. [Brick] Pomeroy, who formerly edited the "La Crosse Democrat."

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46Atf R. GRINSELL, Baden, Mo.

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Binder for Weekly Bee Journal	2 75..	2 50
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Dzierzon's New Bee Book (cloth)	4 00..	3 00
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Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 30..	4 25
Blessed Bees	2 75..	2 50
King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year		
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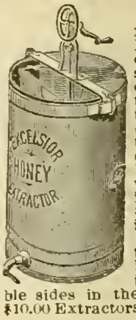
Bee-Keepers' Magazine (A.J.King)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
British Bee Journal	3 75..	3 50
The 7 above-named papers	8 25..	7 00

EXCELSIOR HONEY EXTRACTORS



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

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For 2 American frames,	13x13	inches	$8 00
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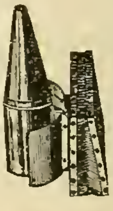

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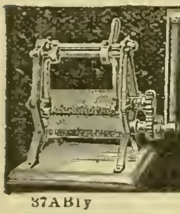

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We have just issued a new four-page circular that will interest any bee-keeper. Send your name on a postal card for it.
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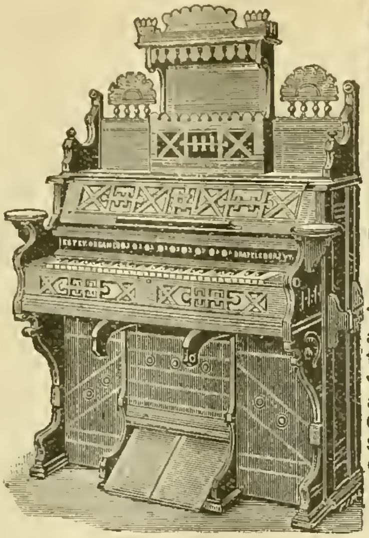

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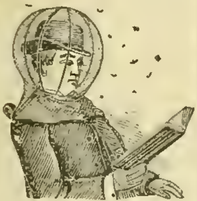

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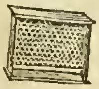

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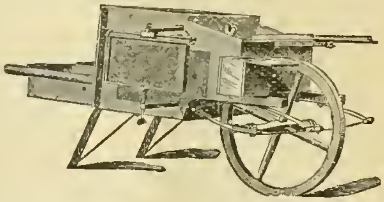

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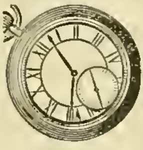

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ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., November 19, 1884. VOL. XX.—No. 47.

THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year ; Monthly, **50 cents.**

Entered at the P.O. as Second-Class matter.

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An Unfavorable Season.......... 748
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All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

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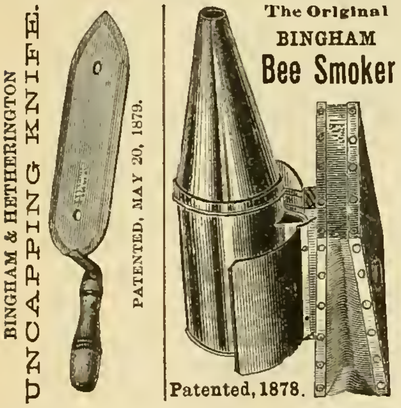

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Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

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Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

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Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

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Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or $8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., NOVEMBER 19, 1884. No. 47.

THE AMERICAN BEE JOURNAL
Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Research Concerning Foul Brood.

Several weeks since we re-published from the *British Bee Journal* the very interesting article on the Cause and Cure of Foul Brood, by Mr. Frank Cheshire, which was read before the Health Congress in London, England.

In the present number of the BEE JOURNAL we re-publish another article from Mr. Cheshire, giving additional particulars concerning his experiments and method of treatment of *Bacillus alvei*, commonly called foul brood, which we feel certain will be read with an extraordinary amount of interest. His experiments, critical examination, and scientific research are very valuable to the pursuit of bee-keeping, and should receive the general commendation of apiarists the World over—no matter whether his conclusions are correct or not.

Particularly will his remarks be interesting to apiarists on the point contained in the first part of the article, where he concludes that the disease is sometimes contained in the ovaries of queens as well as in the eggs and larvæ. If this is so, we may the more easily account for the many strange cases of "foul brood" reported from time to time.

Mr. Cheshire concludes that "*Bacillus alvei* is a disease affecting all and every condition of bee-hood." His proofs seem to be quite conclusive, and if this is the case, it shows how "some have blundered" even in giving it a name! If the disease is contained not only in the brood, but also in young nurse-bees, in old worn-out bees, in drones, in queens, and in the egg yet unlaid—how incorrect it is to call it foul brood, when we are endeavoring to "call things by their right names!" But this more fully illustrates the position we have so often taken, that the science is ever advancing, and will not permit any "stakes" to be "driven" by saying to it "Thus far shalt thou go, but no further." It "bursts all our bonds asunder," and "casts all our cords from" its onward-marching developments.

In accounting for the prevalence of the disease, we have often said that it might have been communicated by healthy bees in search of honey, appropriating it from some "tree in the woods" where the bees had the so-called "foul brood." Now, if this be so, a still wider field presents itself when we consider that young queens from a perfectly-healthy colony may have mated with diseased drones from a neighboring apiary, or with diseased drones from "the woods."

Another point of interest is the inquiry whether there may not be danger to apiarists who are constantly handling diseased bees. Mr. Cheshire's answer to this inquiry is positive and re-assuring. He says: "*Bacillus alvei*, about which we know as yet the most, is utterly unlike any disease-germ affecting men or animals. Bees are almost certainly its only habitation, Mr. Watson Cheyne has up to now failed most completely in his endeavor to influence cats, rabbits, guinea-pigs, or mice by it."

We would commend the article by Mr. Cheshire, in this issue of the BEE JOURNAL, to every bee-keeper for careful perusal; no matter whether it begets approval or condemnation, it will pay every apiarist well to read it carefully.

* * *

☞ The *California Grocer* remarks as follows:

Packages now-a-days afford no criterion as to the character of their contents. It is said that much of the tea that is sold in fancy little boxes, artistically adorned in Chinese and Japanese designs, is made up of vegetable *debris* and chemicals that pass, after due manipulation, as genuine tea. It seems to be a popular delusion that these little lacquered packages indicate pure contents, put up with the nicest care and the most scrupulous honesty in the native lands of the plant. The boxes, however, are made by New York manufacturers, and their wide distribution shows the great expanse of the trade in the home-packed and home-manipulated article which imitates so closely the genuine tea of China or Japan.

Yes; but parties who have any reputation *dare not* put their names on such bogus packages! To label honey or other goods with a producer's name is a safeguard against imposition.

* * *

Bees & Honey at Franklin Co. Fair.

The Franklin County *Chronicle* gives the following notice of a Honey Show:

One of the principal attractions at the County Fair was the Bee and Honey Show exhibited by Dixon & Dillon, of Parrish, Ill. They had two thousand pounds of comb and extracted honey. Their comb was neatly arranged in a pyramidal shape in the center of the building, which extended about 12 feet high. The niches between the crates of honey were filled with books on bee-culture, smokers, photographs of bee-keepers, cans of extracted honey and comb foundation, bleached and unbleached. On one side was the name of Dixon & Dillon neatly cut in fine, yellow comb-foundation, which gave the whole thing a fine and neat appearance. Their extracted honey was in Mason fruit jars, and were in a pyramidal shape on the platform on the west side of the north wing of the hall, which was occupied by them also, it being filled by apiarian supplies, such as honey-extractor, foundation-mill, hiving-box, section boxes, smokers, frames, wire and comb foundation. They also showed Italian and native bees in observatory hives. The Italian queen was reared from their imported queen. Many persons saw the first queen during the Fair. They distributed 500 Leaflets entitled "Why Eat Honey," by Thos. G. Newman, of Chicago, and the consequence was, they sold $114 worth of honey on the Fair grounds. They were awarded 10 first premiums out of 12; the other two were carried off by Mr. W. Hutchison, who had on exhibition about 200 pounds of honey and a good many apiarian supplies.

British Bee Journal.

Phenol and Foul Brood.

QUEEN AND EGGS CONTAINING BACILLUS ALVEI—FOUL BROOD (?)

FRANK CHESHIRE.

In my former article theoretic grounds were given seeming to show that probably the queen, and even the eggs, might be infected, and that foul brood (?) might be communicated by heredity, as in the case of the disease called pebrine,

Statements have been made to me of the singular behavior of some infected colonies, which, although weak and decreasing, seemed ever bent on the building of queen-cells, and that they sometimes also were earnest in rearing drones. Two or three similar instances had come directly under my own observation, and as soon as I made the important discovery that adult bees were sufferers as well as the larvæ, it struck me that in all probability the explanation of the singular behavior referred to was that the bees knowing that the queen was defective were endeavoring to replace her, but that her defects constantly prevented their efforts from being successful.

It was to me remarkable that only two or three days before the Congress, Mr. H. F. Hart, of Stockbridge, wrote to me stating that he had observed a hive in which the disease appeared to strike some of the larvæ immediately after hatching, and that the bees built queen-cells. He then showed very keen insight by suggesting that it seemed to him to point to disease in the queen. At the Congress I heard more of the case, and felt convinced that the queen was actually infected.

Mr. Hart, with much kindness, agreed to secure her, if possible, and forward her to me. Finding this queen as nearly as possible dead at her arrival, I forthwith commenced a careful dissection under my Stephenson's binocular dissecting microscope; the only form of instrument really equal to very minute examinations. Having opened the abdomen and removed the left air-sac, which was very much above the average size—this I have found a constant indication of the presence of bacillus—I came upon the ovary and felt certain at once, from its appearance, that I should find the "missing-link," as Mr. Hart had called it. The ovary, of which I have on previous occasions removed many dozens, was in this instance abnormally yellow and extremely soft, so that it was very difficult to detach it from the tracheæ without tearing. I separated an ovigian tube and placed it under a second microscope (using 600 diameters), and at once, to my extreme gratification, four or five bacilli were seen swimming along with a lazy sort of progression. Detaching now a half-developed egg, and exercising great care to eliminate every possible source of accidental contamination, I placed the egg, with a trace of water, upon a glass slip and crushed it out flat with a thin cover, and in a few minutes I had counted no less than nine bacilli.

The right ovary was very nearly free from disease. During a prolonged search I found two or three bacilli only. All this is extremely interesting, as showing that this bacillus disease, like some attacking the human subject, may take both an acute and a chronic form, and may also settle in some special organ or part of an organ, as bacillus tuberculosis may attack one lung and destroy it and leave the other many years intact.

All will, I hope, forgive my esteeming myself fortunate in having thus been able to make out the only points I had to leave undetermined on the 25th of July last. Then I had found the disease in young larvæ and those fully fed, in chrysalids in all stages, in drones, in workers just gnawing out of the cell (a depression in one compound eye, or in the thorax, or in the fifth abdominal segment, is an indication of bacilli being present), in young nurses and in old worn-out bees, and now in a queen and eggs unlaid. Bacillus alvei is then a disease affecting all and every condition of bee-hood.

Can it continue to be called foul brood? To say the queen is suffering from foul brood would be as illogical and ridiculous as talking of toothache in the liver, or rheumatism in a wooden leg. Surely, our better educated bee-keepers will usually name it "bacillus," and when speaking carefully "bacillus alvei," while those less instructed will by degrees learn the desirability of dropping the old and utterly unsuitable term in favor of the one I give, which will, with a little practice, be no more difficult of pronunciation than its predecessor.

BEE DISEASES IN RELATION TO APICULTURE AND GENERAL SCIENCE.

All diseases may be classed as either functional, organic, or contagious. The latter are now very widely admitted to consist of ailments which are brought about by the growth and rapid multiplication within the living frame of vegetable organisms, commonly spoken of as germs. These organisms (micro-organisms) may be passed from individual to individual, and hence the possibility of infection.

Let us suppose we had never seen bees, but that we are told respecting them, that they live in very numerous colonies, of which the members are always in the closest contact; that their usual system of communication is by actual touch; that they habitually pass the food from one stomach to another; that all the food they have has been carried either within or upon the bodies of their fellows; that their very home is formed of one of their secretions, and that their beds, cradles, and larders, are all interchangeable. And then our informant asks whether we imagine such creatures would be liable to contagious diseases or no. Should we not reply that all the circumstances seemed such as must favor the development of such disorders?

At any rate, during the last two months, I have been able to make out no less than five, or, possibly six, distinct disorders arising from that number of specifically different germs, all of which will require prolonged attention if anything very definite is to be arrived at respecting them. In addition, I suspect strongly that true bee-diarrhœa will also turn out to be an infectious disorder, but since specimens fail me, the question must remain, so far as I am concerned at least, till another season.

A considerable number of cases have occurred in which numerous bees, small, hairless, and glossy, have been dragged *nolentes volentes* to the hive door and then and there evicted, while in other cases crowds of these abnormal bees have died immediately in front of their homes. The question has been referred many times to the pundits, "What are these bees?" The reply has usually *given the information* that "the bees are robbers, old felons indeed who have so often been severely mauled in being turned out from the communities they were plundering, that all the hairs of their bodies had been pulled out." Quite satisfactory is this, if one knows nothing of the subject, but a little acquaintance with the form of the mouth and foot of the bee would show this reply to be most opposite to known facts. The hairs of bees are of four distinct kinds, but none of them are of such shape or size that they can be pulled off in an encounter. The foot has a most beautifully delicate pad centrally placed together with four very long and pliable feeling-hairs. On its sides are two double claws widely set, and so contrived that they cannot nearly meet. With such an instrument the grasping of hairs is impossible, as it is also by the jaws, for reasons upon which space forbids me to enter. But, although, the stereotyped reply is no longer tenable, a new and sufficient explanation is beginning to appear.

Miss Gayton, so well known for her very successful bee-keeping, has, fortunately for our subject, shown herself to be a most accurate and careful observer. This lady has furnished me with a number of bees of the kind referred to, together with her notes and observations running over a period of three years. These bees I find in every case filled with a bacillus somewhat smaller than *Bac. alvei* (the bacillus of foul brood), and which from experiments made at South Kensington in the Biological Laboratory have been already proved to be quite specifically distinct. At present I will content myself by saying that in this as in two or three cases the loss of hair is due to defective nutrition, the same cause that makes the writer so sympathetic with those whose heads are poorly clothed. Some years ago I discovered that if hairs of young bees are by accident broken, they are reproduced by growing from the ends as does an injured lobster's claw. I have some most interesting cases of partial reproduction of hairs of bees mounted for the microscope.

All this would lead to the supposition that weakness and loss of vital energy would tend to premature baldness, if I may be allowed the use of such an expression. This bacillus, undoubtedly, produces this effect, and so again I claim the right of giving a name, and so suggest *Bacillus depilis*, or the bacillus of hairlessness, as a fitting one.

The bees are, undoubtedly, reared in the hive from which they are ejected; but having in some way taken the disorder (Miss Gayton thinks probably from the queen; I have, as yet, no ground for an opinion), they are driven out as a danger to the community, for the disease once contracted, there can be but little question that it may be spread from one to another. Very large numbers of bees sent me from different parts of England and Scotland having the same general peculiarities also contain what at present I conclude to be the same bacillus.

With regard to the other germs found, my knowledge is at present so slender that I must advance nothing beyond the discovery of an enormously large bacillus which takes what is called the zooglea form, two, or possibly three, very minute kinds of bacilli and a micrococcus. The micrococcus will most probably turn out to be a putrefactive kind accidentally present. The whole subject is of great interest, and will, no doubt, hereafter explain, or help to explain, some enigmas in connection with apiculture which cannot be other than useful. *Bacillus depilis* is a very mild offender beside *Bacillus alvei*, but it will be interesting to note whether it succumbs to the same treatment. The merest beginner will not be likely to suppose that we are here discussing robber-bees pure and simple, but merely the "abnormal bees" or "*black* robbers."

That bees are not, or only very slightly, subject to functional or organic disease, is, no doubt, correct. Such disease would forbid increase, and so put a check to their own propagation. By natural and relentless weeding out of the sickly, the survival only of the fittest is secured. I have, however, traced a disorder which seems very rare, in which the liver-tubes degenerate into a thick yellow oil, of which an enormous quantity was collected in the body of one bee I lately examined.

I must hurry on as I have yet to take up the most important questions. 1. Is foul brood produced by chilled brood? Most positively not. Chilled brood, however, furnishes a very favorable resting place for the foul brood germ, and so one is practically often followed by the other. Chilled brood is most absolutely unlike foul brood when microscopically examined. Yet if chilled brood be found, I should begin treating the colonies with medicated syrup at once, as the smallest trace of infection would run riot amongst the dead and neglected larvæ, and establish a diseased condition as a consequence.

2. How does *bacillus alvei* get into a colony? I am now morally certain that very many bees of a colony may be diseased for several months with this bacillus, and yet foul brood may not be found. The bees do clear out solitary cases of infection in the grub often, so that the malady may not at all be suspected and yet exist. There is not one single old idea about this disease which is not incorrect, except that it is contagious. Time, I am convinced, will fully prove that the old bees almost invariably are the channels of infection.

3. Is bacillus the cause or result of the disease? Undoubtedly the cause. The reasons are numerous. Every attack is marked by their presence, whilst in specimens from healthy colonies bacilli never appear. The bacilli increase in number during life, and at death pass into the spore condition. The bacillus, during its growth, like other micro-organisms, produces a definite chemical product. By example, *Bacterium lineola* produces lactic acid, *i. e.*, it sours milk. *Bacterium subtilis* produces another decomposition in milk, forming butyric acid. Without these organisms neither can lactic nor butyric acid be evolved in the normal way. In the Biological Laboratory, Mr. Watson Cheyne and myself placed exceedingly minute quantities of coffee-colored matter from a diseased cell into tubes containing a mixture of meat broth, gelatine, peptone, and salt, guarded carefully from every kind of germ in the manner known to those who have studied the question. The bacilli multiplied and formed a growth in which were hundreds of thousands of millions of individuals in a peculiar characteristic arrangement somewhat like an inverted fir-tree. The tiniest speck was then from this collection inserted into a second tube, and so on until now the seventh is reached. In every case the same characteristic growth appears, a growth never previously seen with any known germ; and upon examining the sixth tube, what is found? The meat juice, etc., has been converted into the definite chemical product formed in and giving the characteristic odor of foul-broody hives. For if one of our most accomplished bee-keepers were blindfolded and asked to smell this tube, he would exclaim, "What an awful case of foul brood this must be! There's no mistaking it, but it is the very worst I was ever brought into contact with." Can anything more be wanting? Bacillus produces "foul brood," and not "foul brood," bacillus. Our last proof shall be duly reported upon. When twelve tubes have been grown by successive inoculation, the contents of the last will be diffused through water, and some of it blown by a spray-producer over a card of healthy unsealed brood. I will not prophesy, although I foresee the result.

In the same manner *Bacillus alvei* has been cultivated in Japanese isinglass (*Agar-agar*), and here it quickly forms spores at 98.4°, the temperature of human blood; and nothing has given me greater pleasure, in connection with this inquiry, save the curing of the disease, than to watch in this cultivation the conversion of *bacilli* into spores and spores into *bacilli*—the ocular and most absolute proof of the lines of explanation which I felt to be the only possible one from the outset in my investigation.

TREATMENT OF BACILLUS ALVEI (FOUL BROOD.)

The interest evoked by my discoveries in relation to the most-dreaded malady to which bees are subject has, as I imagined it would amongst bee-keepers, principally centred around the method of cure.

While examining the great number of specimens of infected combs sent me by friends and strangers, two points received, to my mind, demonstration: 1. That Dzierzon is in error in asserting that there are two kinds of foul brood—one, mild, chiefly affecting the larvæ; the other, malignant, making its main impact upon the chrysalids. There is but one kind of foul brood. The same bacillus causes all, and, contrary to Dzierzon's idea, that form of attack which strikes the larvæ early is the more active and the more difficult of treatment, if there be a difference; and that if this early failing of the brood be caused by disease lurking in the queen, she will, so far as we as yet know, need to be supplanted. 2. That, although all cases are produced by the bacillus which I have called *alvei*, and so far are identical, yet the spores are at times more robust and virulent than at other times. Those who have given any study to germ diseases know that this has not only been observed, but actually made of practical use.

Amongst the specimens forwarded, two or three when examined microscopically, indicated, or seemed to indicate great activity, and the apiaries from which they came had in each case been ravaged by the scourge from end to end. In one instance the colonies, running very nearly if not quite to three figures, had not a sound one amongst them; in a second, 19 colonies were dying out in rottenness, and here, also, not one had escaped.

The colony supplied to me by the kindness of Mr. Mills, came with a sufficiently bad repute; the malady had in a very short time smitten, in an apiary of about 20, every colony save 3. I regarded it as a fair typical case of advanced foul brood, quite beyond the reach of ordinary curative measures as they have been usually advocated. The manner in which the disease in this instance died out before my treatment is now matter of history, but I had not, at the time of the Congress, tried conclusions with the malady where it had been most relentless, and where it had worked the most devastating effect. Although I felt confidence that the disease was in all cases alike, and so must in all instances be amenable to the same methods, yet I could not rest until the experiment had been tried; and so, having secured three combs from the larger apiary previously referred to, stipulating that they should be the worst that could be found, and one from the second saturated with disease, and having possessed also for 18 days a comb given me by Mr. Mills as a specimen of what the disease could do, which comb had become rotten, mildewed so that half the cells could not be seen, and had little maggots feeding on the bodies of the decaying larvæ, I determined with these to make a colony.

On the morning of Wednesday, Aug. 6, these 6 terrible combs were placed into a hive and stood in the position of a good colony, which was removed to a new stand; the queen having been found, was popped in under the chaff-tray (which I use instead of a quilt) between the disease-laden combs. The poor foragers, with heavy loads and light hearts, began dropping in numbers upon the alighting-board; but the confidence with which they ran in gave almost ludicrous contrast to the dismay with which they instantly re-appeared. Circling in the air and taking their bearings, they tried again and again to discover what had happened, when in sheer rebellion they refused to enter, and clustered at night thickly on the outside of the hive, buzzing and fanning with a noise audible at many yards distance. The following morning saw no improvement, and at about 11 o'clock they went off bodily and settled as a swarm in a cherry-tree, in the very spot to which every natural swarm of mine has this year betaken itself. Having hived them in a skep, I was about to return them when they again took wing and gave me a journey into a neighbor's garden. "Prudence is the better part of valor," so a concession was made, and one of their combs divested of bees and containing mostly unsealed larvæ was given to them at the front of the hive. They were now returned and very many entered, but a big lump remained clustering about the porch. I really felt sympathy for the worried little insects, for as a lady said in a letter to me a few days since, "I love my bees." A point was to be proved, however, and so temporary discomfort could not be considered.

Early next morning I began by pouring my medicated syrup into their combs. This they re-arranged, and in doing so started the cleansing process. Day by day, at at an early hour to prevent robbing, I fed as described, while the improvement became marked. Medicated syrup which at first would be utterly refused unless poured into the combs, will often, after a few days, be accepted freely from a feeder in the usual way. But in treating all cases such management must be adopted as will secure the using of a liberal allowance of the remedial agent. Noticing that the syrup was freely taken at the sixth morning, I determined to pour into the combs no longer; but made an impromptu feeder, with which I should be able to watch the movements of my small assistants. A shallow tin box about 3 inches by 6 inches was supplied with strips of very thin wood, which were stood on edge, and spaced apart by little uprights which gave room between for the bees to enter, after the fashion of a Gray's feeder. This was placed behind the dummy; the latter being raised sufficiently to allow the workers to pass beneath it. Into this box now the food was poured, the bees continually carrying it into the combs. As the weather was dry, the syrup was given thin, and the box was never allowed to become empty. Eggs continued to be laid rapidly, the colony became active and content, all smell vanished, and to my joy the brood as reared in these previously deplorable combs was almost perfectly healthy from the first. Most, however, of the grubs on the lower edge of the added comb took the disease, and passed through the first well-known stages; but they all disappeared, being undoubtedly carried out by the workers. This circumstance supports most completely my theory as to the means of infection, as given in my paper at the Congress. Three or four sealed cells still remain, which I know have the remains of dead grubs. When their covers break, the bees will clean them out; but with these exceptions the hive is now (Aug. 23, 17 days after commencing operations) as perfect in all respects as could be desired; while every dead grub, all coffee-colored matter, and dried putrid scale, is completely removed.

TREATMENT OF FOUL BROOD AT THE END OF SEASON.

The plan of pouring phenolated syrup into the combs, which I have found to succeed so magnificently during spring and summer, presents some difficulties at the close of the season which it would be well, if possible, to overcome. In the spring the bees are growing in activity, and then my remedy enables them triumphantly to clean their combs and put all quickly into proper form; but my experience, this autumn, shows that dispirited colonies are content, as the period of rest approaches, to take little trouble in cleaning combs which would not naturally be required in the near future, for brood-rearing purposes; besides this, the pouring of syrup into the comb is extremely likely to start robbing, and in addition must have a chilling effect on the colony.

My supreme desire is not to be able to cure colonies myself merely, but to enable all to do likewise; and so I have continued to experiment, and in the result have conquered the difficulty referred to. Cake, consisting of sugar and pea-flour, given at the close of the season, is an unfailing stimulant. This I have made in the usual way, but after removal from the fire during the stirring and cooling process, I have painstakingly mixed with it 1-5 of an ounce of absolute phenol to each 7 pounds of sugar; *i. e.*, ¼ of the bottle of remedy. This cake, placed flat-side downwards over the frames, is rapidly taken, and with the very best results. Unfortunately, most hives—I had almost said almost all—have, to my mind, two very radical defects: 1. Their top edges are so narrow that any displacement of the covering causes a most disastrous leak of the vital heat of the colony, which, under all circumstances (except in the height of summer), should be heedfully guarded. In diseased and weakened conditions, if this heat be allowed to escape, the case is hopeless. 2. They are covered by stubborn, ill-fitting, often most untidy bits of carpet. Hives so formed and furnished do not admit of cake-feeding without exposing the poor bees to the highest discomfort. The plan I advocated ten years since, will, I hope, become the plan of the future. Instead of carpet, place calico over the frames, and upon this stand a chaff-box, a simple ring of wood 3 inches deep, and resting on the hive edges. Upon the under edge of this ring of wood tack loosely—loosely, I repeat—sacking of some such substance, and fill the whole with chaff or cork-dust. This placed over the calico covering, the cake will fall into form, and keep all in the most comfortable condition possible, and give the bees a chance. This cover, too, is always most convenient, especially if one feeds behind the dummy. Any bee-keeper once trying these chaff-boxes would feel but little content with any of the more usual covers. New cakes would, of course, be supplied at intervals, as regulated. As a help also, spraying every three or four days, the combs awaiting introducion, with 1 per cent. phenol solution might be adopted.

I have been keeping the disease going, in order to simplify as much as possible the mode of treatment, and, as a result, have felt the need of giving additional hints.

DISEASED SPERMATHECA.

Almost all know that the spermatheca is filled by active, thread-like bodies called spermatozoa, and which are formed within the body of the drone and transferred by him to the queen at her flight. These spermatozoa singly pass into all eggs which afterwards become either workers or queens (drone-eggs they do not touch), the egg having in it a minute hole called the micropyle to give the spermatozoon entrance.

I wish to call attention to the queen sent by Mr. R. Andrews, a gentleman whom I have not the pleasure of knowing. She was in appearance perfectly healthy, but was accompanied by a letter stating that she swarmed out June 20, laid in about 6 square inches of comb, and then, although she had everything in her favor, never laid again. I found in her ovaries and juices nothing abnormal. Her spermatheca was round, full, and of usual size. Under the microscope I removed its skin containing the tracheæ (air-tubes), some spermatozoa were left out on a glass slip and examined, when, to my great surprise, I found numbers of *bacilli*. Some were then dried and stained, when thousands of *bacilli*, now deep blue, revealed themselves. The inflamed condition of the mucous gland and valves was clear, and the reason that ovipositing had been arrested was evident. This queen was a young one; possibly the old colony had lost its queen, or had swarmed unobserved. She had flown, met a diseased drone, and had contracted the condition which the microscope revealed. Mr. Andrews, unaided by any hint of mine, in his second letter, says this, "Do you think that the diseased spermatheca arises in any way from foul brood? If so, my friend's bees, from which the queen was taken, have never been infected with the disease; but the disease did exist (up to a few days ago) within a distance of 400 yards of his apiary." Here it is. I have found many drones with spermatozoa badly touched by *alvei*, and such a one has done the mischief.

CORRESPONDENCE

For the American Bee Journal.

Preparing Bees for Winter.

G. M. DOOLITTLE.⊙

Having my bees nearly prepared for winter, I thought it might not be uninteresting to the readers of the BEE JOURNAL to know how I have done it. In the first place, about Sept. 10, I examined every colony in the yard, and noted their condition upon a piece of a honey-section. This piece tells just how much honey each colony had, just how much they were fed, and also all about the pollen, some having no pollen, others but a few cells, while others have several combs nearly solid with pollen. As this piece is to be left on the hive, I shall know next spring about what there is of the pollen theory, if we should happen to have a severe winter. Although I have watched carefully, I have seen no proof yet to disprove the statement which I made a year ago, that bees of mature age do not eat pollen, except as it is used to form chyme for the young brood; while Dr. C. C. Miller gives in a late number of the BEE JOURNAL conclusive proof that I was right in my statement.

After having the exact condition of each colony put down on a piece of section, I next fed each colony enough food to make up the requisite amount needed for winter. Some were fed but two or three pounds, while others were fed the full amount, 25 pounds. As a careful minute was made of this, I shall also know how those come out which had 15 pounds of honey and were fed 10 pounds of sugar syrup, according to the plan of the editor of the *Bee-Keepers' Guide*.

After trying all plans of making a winter feed for bees, and being pleased with none of them, I hit upon the following: Take 15 pounds of water and put it into a tin vessel over the fire, leaving it there till it boils, then put in 30 pounds of granulated sugar, stirring for a moment or two till the sugar is partially dissolved, so that the sugar shall not settle down on the bottom and burn. Leave it on the fire till it boils, when it is to be taken off, after which pour in 5 pounds of well-ripened honey, and stir till the honey is thoroughly mixed with the syrup. This gives about 48 pounds of nice, thick syrup which will not crystallize, sour or granulate, no matter how long it is left before it is used.

For feeders I took pieces of boards 1 inch thick by 3 inches wide by 11 inches long, and nailed to the ends two side-boxes of my frames, having the ends of the frame-stuff come even with one side of the board, which left the side-pieces sticking above the boards 7¾ inches. On each side of these I nailed thin stuff which was only ⅛ of an inch thick by 7¼ inches wide by 11 inches long, which gave me a feeder holding 4 pounds. The feeder was now filled with hot beeswax, which was next poured out into another feeder, and so on until all were well coated. A top-bar of a frame was now nailed on to the ends of the frame-stuff, having a hole bored in it, in which to insert a funnel in feeding, when I had something in the shape of a division-board and feeder combined. If I wished to feed rapidly, I could place three or four of these feeders in the hive at a time; if slowly, pour only as much into one as I wished to feed.

The beauty of the thing is, that it works equally well as a division-board in connection with a quilt or sheet of enameled cloth, as the quilt can hang over the outside of the feeder, thus keeping all snug and warm. Also, this feeder can be kept in the hive all the while, so as to be ready for use at any time. No float is needed to keep the bees from drowning, as the feeder is so narrow than they can climb out on either side, even if you pour the feed all over them.

Having the bees all fed, I next packed fine oat-straw in behind the division-boards, after first putting a strip of cotton-cloth over and down on the outside of them. These strips of cotton-cloth are long enough to reach over the top of the brood-chamber, so that when both sides are packed there are two strips of cloth above the bees.

I next made cushions by taking two pieces of cotton-cloth 18 inches square, and sewing them to a strip 72 inches long by 4½ inches wide, this strip extending all the way around the edges of the two square pieces. Before sewing the two ends of the strip together, I filled the cushion or sack with fine, dry basswood sawdust which I saved last winter when sawing sections. After the sawdust is put in, the two ends are sewed together, when I have a cushion 18 inches square by 4 inches thick, which projects 2 inches over my brood-chambers on all sides, as that is but 14 inches square on top.

The hives on which I use these cushions are chaff-hives, permanently packed front and rear, and made according to the description that I gave in the little pamphlet, "The Hive I Use." After these cushions are put on, the entrance to the hive is regulated to 6 inches long by ⅜ of an inch deep, and an 8-inch wide board set leaning up in front of the entrance, to keep cold wind and snow out of the hive, when the bees are left to care for themselves until the arrival of spring. In this way one-half of my colonies are fixed; the other half are in single-walled hives, and have been fed the same as the first; but instead of using strips of cotton-cloth above the frames, I use a quilt made by sewing a strip of cloth 40 inches long by 15 inches wide, sewing up the sides after doubling it, so as to form a pillow-case or bag 20 inches long by 15 wide. Into this is slipped a sheet of wadding, four double, which just fills the quilt so that I have two thicknesses of cloth and four of wadding above the bees. The cap or hood to the hive is now filled with fine straw, so tightly pressed in by means of a follower, that it will stay in the cap in lifting it on or off.

On Nov. 20 these last named hives are to be placed in my bee-cellar, which I described two or three years ago in the BEE JOURNAL. In putting them in, the tier of hives at the bottom of the cellar are raised ½ of an inch from their bottom-boards, so as to give abundant lower ventilation; while the next tiers stand on the caps of the first, being raised on ½-inch blocks as are the others.

As I shall try no artificial heat this winter, I expect the cellar to keep at an even temperature of 42°, as it always has done heretofore when no artificial heat has been employed. The plan of cellar-wintering is the same as that which I successfully employed previous to last winter; but the other is new *to me*, except as 2 colonies were successfully wintered in that way during the winter of 1883 and 1884.

Borodino, N. Y.

For the American Bee Journal.

Why do Bees Eat Pollen?

J. F. LATHAM. ♀

Bees eat pollen only at such times when their physical requirements demand as food something containing elements necessary for the support of bodily stamina; or in other phraseology, food necessary for the renewal of the waste of tissue at times when muscular labor calls for extra support. When pollen is used only in compliance with the promptings of nature, it is taken into the mandibles, masticated and swallowed, after the manner of herbivorous animals, in considerable quantities, as may be readily noticed, especially in the spring, when brood-rearing is progressing rapidly on the first new pollen of the season.

Aside from the calls of circumstances, bees will not eat pollen unless, perchance, it is mixed with the honey in the combs, or with the nectar when gathered from the flowers. When mixed in the latter way, it seems that the quantity eaten is too small to do harm, even if pollen were the prime cause of diarrhœa. If the intestines were loaded to distention with honey free from pollen, it is evident that the result would be the same as though their contents were honey pollenized in the nectar (unless a special disease be created for a special condition).

I have seen bees, during their first spring flight, attempt to rise in the air; but, being unable to do so in consequence of their distended bodies, they would fall on the snow, discharge their fœces and die, the excreta scarcely making a stain. What would evidently have been the consequence had those bees been confined to their hives awhile longer? Had they evacuated their intestines in the hive, it would have been styled, in apicultural parlance, bee-diarrhœa. Had they died without relieving their surcharged organs, their demise could have been from no other cause than intestinal inflamation, "mortification," virulent secretion, one or all.

When bees "spot the snow" during a flight in winter, they are generally declared to be affected with diarrhœa; but I have not always found this to be true, in its broadest sense. I have seen the surface of the snow completely stained in front of some of my hives during a "flight" of the bees, and no indications of soiling by evacuation from the bees, was within when the hives were opened for the first time in early spring. This evidence has led me to the belief that the color of the excreta is not a sure exponent of bee-diarrhœa; for, if pollen is the ingredient which causes the coloring, as is generally attributed, it did not cause diarrhœa in the instance named.

Perhaps it may be asserted that the bees did not stay in the hive long enough to become diseased with diarrhœa. Well, they did not; and if they had, pollen would not have been the *prime* cause of the malady.

Bees will winter well on combs containing a super-abundance of pollen. A man and a rifle loaded with powder and ball may bear companionship and no harm result. Pollen and bullets may be instruments of destruction, but the prompting power must exist behind them. Whisky never caused intoxication when let alone; a prompting thirst induces the victim to imbibe, and inebriation with its direful consequents follow. The same lustful desires which prompted Pandora to open the box and flood the world with evils, induced the accredited progenitors of the human race to pluck and eat the forbidden fruit. The same appetite which induces bees to eat pollen to their destruction, would lure them to indulge in some other act, as detrimental to their existence, were the means within their reach. Pollen may feed the smouldering embers of morbid desires, but it will not cause them.

The food of the laboring man must be rich in muscle-producing elements; the horse or mule will not "hold its own," when put to hard work, unless it is fed a goodly quantity of provender rich in nitrogen: and the fox-hound runs best when fed on fresh beef. When the conditions of the brood-nest are such that bees need no pollen to support an extra drain on the organic stamina, their inclination to conform to hibernal requirements is strengthened, and it is very apparent that they must lapse into that quiescent state of semi-dormant repose favorable to their safety.

If all of the pollen be removed from the combs, and bees have pure, well-ripened honey, or good sugar syrup for stores, they are supplied with the aliment necessary to maintain animal heat, which, with quietness, including its cause and effects, will carry them through the cold winters of our Northern climate in good condition. As the labor of providing combs free from pollen would be great in large apiaries, not considering the removal of pollen from the combs by artificial means and feeding, there appears to be two practical methods by which the bees may be guarded from its bad effects: 1. By keeping them in conditions which will not stimulate its use. 2. By contracting the brood-nest so that the combs may be kept about full of eggs and brood from spring until fall, thus leaving but few cells for its storage. The first is the most conformable to nature; the second looks feasible. By the first method *all* of the obstacles to successful wintering are neutralized; by the second, but *one*.

Since the foregoing was written, I have found, on page 694, a paragraph in Mr. Theilman's article in which he writes: "He (Mr Clarke) does not tell us how to proceed or to perform with our bees in order to have them hibernate." In the last part of the closing paragraph of the same article, he writes: "Mine do best at 42° above zero; that is, they are the most silent at that point. The farther above or below 42° the stronger the noise becomes in the bee-house. This has been my experience for the past ten years."

If Mr. T.'s bees conform to hibernal requirements at 42° above zero, it seems that that degree of temperature, with good air, good stores, and a severe letting alone, are, if they are constituted so as to make the best of such favorable surroundings, all that their welfare demands.

Cumberland, Maine.

For the American Bee Journal.

Marshall Co., Iowa, Convention.

At the recent session of the Marshall County Bee-Keepers' Association six new members joined the Association. The following is a condensed report of the proceedings:

Mr. O. B. Barrows said that he feeds his bees in the fall, if he finds it necessary, in order that a colony may have plenty of good stores for the winter. He winters his bees in a cellar, and puts his hives with the front to the wall; he also has the front of the hive lower than the back, so that the bees will easily keep it clean.—He keeps plenty of good air in the cellar, and the temperature just so vegetables will not freeze. He uses quilts over the frames in place of honey-boards. He said that when he was a boy, it was thought that a cellar should be kept very warm, but he finds it best for all vegetables and fruits to keep a cellar cool, just above the freezing-point as near as he can regulate it. He finds this a good temperature for his bees, and the light of the cellar does not disturb them. His stove flues come to the bottom of the cellar, which he finds a great help in ventilation.

Mr. Hunt, of Centre Point, has an apiary of 300 colonies. He finds it necessary to keep out all light where so many bees are in one cellar. He has the cellar well ventilated by two sub-earth pipes which run about 60 feet out from the cellar before coming to the surface of the ground. This admits fresh air, while the stove-flue carries off the foul air. He wants colonies in Langstroth hives to weigh 50 pounds at least; and if pollen is plenty, a little more. He thinks that fall honey is not as good for winter stores as the early honey or coffee A sugar. He has never used a thermometer in his cellar, but thinks it a good plan. He lost a number of colonies in the winter of 1882-83, by not giving them proper care.

The President, L. Coleper, Mr. Jackson, and several others claimed that one of the essentials in successful wintering, and a preventive of spring dwindling, was to have a good supply of young bees at the close of the honey season.

The majority present thought it best to contract the size of the hive by the use of division-boards, according to the size of the colony. By this means a colony would keep at a more even temperature, either wintered in the cellar or on the summer stands; and quilts or chaff-cushions were recommended by nearly all in place of heavy boards.

Mr. L. Coleper said that he begins in September to prepare his bees for winter. He tries to renew all colonies that have queens over two years old, with good young queens. He wants plenty of young bees at the close of the season, and about thirty pounds of good honey to each colony. He uses quilts over the frames, and and has no other cover when his bees are in the cellar. He places the first row of hives about one foot from the cellar floor, and then puts one above another, and takes them out in the spring when the weather permits.

Nine of the members present reported 497 colonies, spring count, and 596 colonies, fall count; and 15,170 pounds of extracted, and 3,940 pounds of comb honey.

The President said that he began the spring of 1883 with 4 colonies, and increased them to 7. He wintered them in a cellar which varied from 32° to 38° in temperature. All came out strong, and he has since increased them from 7 to 22 colonies. His surplus amounted to 145 pounds of extracted and 102 pounds of comb honey. His bees have stored but little honey since July 15.

Mr. J. L. Comstock, of Sac City, said that he was not well versed in bee-keeping. He had begun with 2 colonies about June 5; these had increased to 7, and he had taken 225 pounds of comb honey in two-pound sections, which he sold at 20 cents per pound.

Several bee-keepers spoke on the subject of feeding where necessary, so that bees may have plenty of good stores for winter; and also the advantage to be derived by spring feeding to encourage early breeding.

Mr. Hunt described his method of rearing queens, and the way in which he placed eggs into good cells already built and containing plenty of the royal food, so as to produce extra queens from the queen which he desired to breed from, and in an unlimited number. He had used the method for four years.

The Convention then adjourned to meet on Saturday, Jan. 21, 1885. The subject for the next meeting is

"Spring management and apiarian supplies." For essays, M. A. Jackson, subject, "Over Production," and F. H. Hunt, "Queen-rearing, and how to Italianize an apiary."

J. W. SANDERS, *Sec.*
J. SWIFT, *Pres.*

Canadian Farmer.

Canadian Honey Crop for 1884.

R. F. HOLTERMANN.

The honey season for 1884 having closed, it is to be regretted that more accurate statistics cannot easily be obtained. However, all bee-keepers are aware that where in Canada one colony was kept in 1880, there are ten kept at the present day; and this can be accounted for only as follows:

There was comparatively little known about bees, and the risk was too great; but to-day with the knowledge gained being utilized, the loss in wintering, etc., is decreasing, and the superior management has increased the profit, which, when combined with the fact that it wants but a small capital to purchase stock enough to yield a handsome profit, apiculture is becoming a favorite pursuit.

The spreading of this pursuit, together with the bright prospect when the season opened, caused many bee-keepers to become alarmed, they rushed to market with their honey, and again and again do we find that they have sold beautiful extracted clover honey at 8 cents per pound, and honey in one-pound sections was retailed at 15 cents throughout Haldimand and Norfolk. These men forgot that where 5 years ago one pound of extracted honey was used, ten or more are used to-day, with plenty of room to further develop, especially when honey sells at the moderate price of from 12½ to 15 cents per pound; and one may safely add that there is less honey on the producers' hands in Canada to-day than there was at this time one year ago.

From careful inquiries, it appears that the eastern part of Canada has not done as well as the western, and and in any case only those bees in first-class condition, early in the season, were able to gather a surplus; and that for the following reasons: The honey-flow lasted only for a short time in the forepart of the season; if a colony had to build up on this, by the time they were strong enough to gather a surplus, the honey-flow had stopped.

Through western parts of Canada the season was earlier, thus giving the bees more time to work before the unfavorable season set in. Owing to the unfavorable weather, basswood yielded but little; in some places nothing at all, few places being favored with more than two days. The best season for thistle is hot, damp weather, so it yielded but little, leaving the entire surplus to be derived from clover and buckwheat. Where Alsike clover and white clover grew side by side, the bees always preferred Alsike, which, for the last four years, has proven to be the surest honey-producer. Fall flowers did not yield abundantly; they seldom do. Buckwheat has proven itself valuable both for winter stores and prolonging brood-rearing; but little can be obtained for it when sold for consumption.

The following are some statistics obtained: In sending in reports many neglected to mention if bees have to be fed for the winter. This should always be done, stating how much, as it may make a difference of 30 pounds per colony. If the Government were to ask, "How many colonies of bees in the spring—what increase—how many pounds of honey, comb and extracted did you obtain?" when submitting other questions to the farmers, it would be a step in the right direction.

Thirty-one bee-keepers, having 1,484 colonies in the spring, 2,569 colonies in the fall, had 37,250 pounds of comb honey and 59,845 pounds of extracted honey.

It will be seen that by the above valuation of 1 pound of comb as 1½ of extracted, the yield has been about 80 pounds of extracted honey per colony; that the increase has been about 90 per cent.; and that several reported that they had exerted themselves to prevent increase.

Now this year is considered scarcely up to the average, but the result has, on the whole, been very satisfactory; and if the grand total of honey gathered, and increase of bees obtained in Canada, were reported, it would show what a quantity of secretions from various flowers has been utilized, heretofore almost entirely wasted; and not only has the nectar been utilized, but it has served more fully the purpose for which it was distilled, viz: to attract insects—the bees—to fertilize the flowers and thus give a more abundant harvest wherever bees are kept. Many complained that they were unable to get comb foundation in time, and their yield was smaller because they were unable to get it when required.

Ontario, Can.

For the American Bee Journal.

Comb Foundation in the Brood-Nest.

W. Z. HUTCHINSON.○+68—108.

When producing extracted honey, I consider the use of comb foundation in the brood-nest as profitable, and I see no reason to change my views; although I must admit that I have made no decisive experiments to determine whether its use is profitable when producing extracted honey. Three years ago I thought it strange that Mr. Doolittle should hold such views as he does upon this subject, and I have heard bee-keepers remark that they looked upon Mr. Doolittle as having the most level head of any apicultural writer; and it was a great wonder to them how he could be so "off" on this foundation question. When asked for reasons, they could give plenty of them; but when asked for experiments, none were given.

After producing comb honey for one year, I thought I could see reasons why Mr. Doolittle might be right; and in order to know, from my own individual experience, whether it was profitable for me to use comb foundation in the brood-nest when producing comb honey, I began experimenting last spring. The first swarm was hived on empty combs, the second on foundation, and the third on empty frames; that is, they were empty except that a "starter" of foundation ½ of an inch wide was in each frame. This order of procedure was continued until 15 swarms were hived, when no more were hived on empty combs, as it was very evident that such a course could be continued only at a loss.

The first thing that the bees did, was to fill the brood-combs with honey; not a drop of honey would they store in the sections until the brood-combs were filled so full that the queen had no room in which to lay; and, even then, when invited to commence work in the sections, they seemed to "roll up their eyes" in a knowing sort of way, as much as to say: "Oh, we are pretty well fixed down here;" and when they did finally commence storing honey in the sections, it was in such a slow, easy, "loafing" sort of manner that these 5 colonies fell far behind (about 40 per cent.) those hived upon foundation or empty frames; and as the queens were cramped for room to lay in, they were not so strong in numbers when fall came, which, had there been the usual fall honey harvest, would have been quite an important factor. I presume that many will say that they should think that the bees would carry up the honey stored in the brood-combs, and thus give the queens room in which to lay; I cannot help what they think, but I know that they did not to a very great extent.

When the use of empty combs was discontinued, there was no appreciable advantage in the use of foundation in the brood-nest, as compared with empty frames; and each alternate swarm was afterwards hived upon foundation, and the other swarms hived upon empty frames. It was the intention to continue this course throughout the rest of the season, but an accident and sickness put things in bad shape, and, although an equal number of swarms were hived upon foundation and upon empty frames, yet they were not hived alternately, the majority of those hived upon foundation being earlier swarms than those hived upon empty frames. Twenty swarms were hived upon foundation, and an equal number upon empty frames, the honey from each colony being weighed; and those hived upon foundation had stored only 2 pounds more per colony than those hived upon empty frames, and this could be more than accounted for by those which had foundation having been, by a small majority, earlier swarms. The empty frames were filled with straight combs without any "looking after," and but very little drone-comb was built.

When hived upon foundation, the bees could store no honey in the brood-nest until the foundation was drawn out, and as soon as a few cells were even partly drawn out, the queen was ready with her eggs; and, as the bees had access to the surplus boxes, they began storing honey in them, leaving the brood-combs to the queen. The bees seemed to reason and act about as follows: "Downstairs is the place for the brood, and there it shall be; upstairs is the place for the honey, and there will we put it." When given empty combs they seemed to say: "Here are the combs all ready made for us, let us fill them." And fill them they did, after which, to a certain extent, they appeared to consider their tasks at an end.

Where bees begin to work when first hived, there they continue to work until the space which they occupy is filled; and to commence work in an adjoining apartment when the season is partly over, seems to be contrary to their instincts; hence, I think that bee-keepers make a mistake when they wait a week or ten days, yes, or even 24 hours before putting boxes on a hive containing a newly-hived swarm. Put on the boxes at once, before the swarm is put into the hive, and let them go into the boxes when they are hived, and commence work there and in the brood apartment at the same time; then there will be no crowding the brood-combs with honey.

When a swarm is hived upon empty frames, there can be no honey stored in the brood apartment until comb is built; and as fast as it is built, the queen fills it with eggs while the honey is stored above in the surplus department. Let a swarm be hived upon empty frames, and be given access to the surplus boxes, and in a week or ten days after let an examination be made; if the bee-keeper's experience, who does this, is like my own, he will find the frames full of combs, the combs full of brood, and the surplus boxes full of honey.

I believe that the time is not far distant when we will have the brood in one part of the hive, and the honey in another to a much greater degree than at present; then nearly all the honey which is stored will be in shape to be sold at a good price, and nearly empty brood-combs, that autumn will find in the hives, can be filled by cheaper but better winter food, sugar syrup.

In hiving bees upon empty frames, and immediately giving them access to boxes filled with foundation, or with partly-finished combs, I have found a queen-excluding honey-board a necessity; otherwise the queen would at once invade the sections. Although I have made no experiments, at least no very extensive or conclusive ones, yet I think that the use of comb foundation in sections is profitable. We desire to have combs built in the sections very quickly, at least as fast as the bees can fill them with honey, and there is no question but what the use of foundation facilitates the building of comb.

In the brood-nest, when working for comb honey, we, or at least I, wish to have the combs built no faster than the queen can occupy them with eggs. It has been asserted that the secretion of wax is voluntary with the bees; that when given foundation they secrete but little wax comparatively; hence, the inference is drawn that the use of comb foundation is profitable in all places. I have neither the power nor the desire to disprove the statements in regard to the secretion of wax; the question with us is: "Does it pay to use comb foundation in the brood-nest when producing comb honey?" It is probable that, in producing extracted honey, its use is profitable; but my limited experience says: "When producing comb honey, hive swarms upon empty frames, and give the bees access at once to the surplus department." Of course "one swallow does not make a summer," but one experiment, such as I have made, proves enough, at least, to show that the subject is worthy of consideration and careful experiment, which I shall certainly give it during another season.

Since writing the above it has occurred to me that in producing extracted honey, it might be profitable to hive a swarm in a hive, the brood department of which is furnished with empty frames, and the surplus department with foundation, a queen-excluding honey-board being placed between the two departments.

Rogersville, Mich.

Exchange.

Extracted Honey.

REV. O. CLUTE.

All people know the excellence and the beauty of comb honey. It is in need of no praise. But extracted honey is a new article with which many people are not familiar. They have never seen its lovely amber gleam from the glass on the tea-table; they have never caught its delicate aroma, "fragrant as spicy winds that blow o'er Araby the blest;" they have never tasted its delicious flavor, compounded by the fastidious bees from nectar gathered from flowers of woodland and field. The only liquid honey with which they are familiar is the old-fashioned "strained honey," which was taken by mixing comb, and bee-bread, and dead bees and dead larvæ into a sticky mass, and straining from it all the liquid which could be obtained by pressure. This liquid contained the juices of bee-bread and bees and larvæ as a flavoring for the dark, rank honey which this squeezing process secured. Such honey was coarse in flavor, and most repulsive in associations. If extracted honey were of the same quality it would deserve no favor. But it is as different in quality as anything can possibly be.

Extracted honey is honey in its purest condition, exactly as gathered by the bees, without any foreign admixture whatever. All day long, week after week, do the happy bees revel among the clover blooms, or in the nectar-laden chalices of the lofty linden trees, or among the many flowers that in fall cover hills and valleys with brilliant hues. When their hives have become heavy with luscious stores the careful bee-keeper prepares to take the stores, but in such a way as not to injure his "faithful friends," the bees. He opens the hives, removes the cloth that covers the frames of comb, and directs a stream of smoke from the smoker in his hand, down upon the bees. Before the smoke they rapidly retreat toward the bottoms of the combs. He lifts out a comb, heavy with its sweet store, and covered at its bottom with the alarmed bees. He gives the comb a sudden and swift jerk downward and thus dislodges most of the bees, which fall into the hive. If any bees still cling to the comb he brushes them off with a swift, light stroke with a common whisk broom, then hangs the comb in a carrier by his side. So he takes comb after comb until all are taken that he desires. These he carries to the extracting room. Then, resting a comb on a light frame placed on an empty barrel, he shaves off the cappings of the cells with a sharp knife made for the purpose. When the combs are uncapped they are ready for the extractor.

The extractor is made in several different styles. In all styles the principle is the same. Everybody knows that water poured on the surface of a rapidly whirling grindstone flies from the surface by the motion imparted to it by the whirling stone. The honey-extractor is a machine which utilizes this centrifugal force by so applying it that it throws the honey from the combs. The extractor is essentially a fixed can with a revolving frame in it, in which frame the combs of honey are set and rapidly whirled. The centrifugal force causes the honey to fly from the cells against the sides of the can. It runs down the sides, collects in the bottom and is drawn off through a faucet. It is as charming in color and as delicate in flavor as when the eager bees sought it in the depths of clover or of linden blooms. When the mistress at the tea-table dips it with silver spoon from the beautiful cut-glass bowl into the china dishes of fairy-like thinness, its sparkling gleam suggests the mysterious amber from the shores of the storm-tossed Baltic. When the ruddy boy spreads it in generous flow on the cakes that come smoking to the breakfast table he surely has a "royal dish to set before a king."

It is only a few years since the honey-extractor was invented, and it has already come into very wide use. Nearly all progressive bee-keepers use it more or less, even if they run their apiaries mainly for comb honey. A great many bee-keepers are, by its aid, producing only extracted honey, which they find a profitable business, some advantages of which I will briefly state:

In getting extracted honey the combs are not injured, hence they can be returned to the hive and filled several times in one season, then stored away for use in other years. When the combs are thus returned to the bees to be refilled, the little workers do not have to spend their precious time in making comb, but can devote every moment to the glad work of gathering the rich harvest with which the flowers overflow. This enables them to store many more pounds of honey than they could secure if they had comb to build.

Again, honey comb is made of beeswax. Wax is made by the bees from honey. When bees need comb in which to store their honey, they fill themselves with honey, and hang themselves up in large clusters in the hive. While they thus remain quiescent for several hours the honey undergoes a process of digestion, and is changed into wax, which appears in minute scales on the underside of the rings of the abdomen. Then they help each other in taking off these little scales, and in kneading them into comb. It has been estimated by competent observers that it takes from fifteen to twenty-five pounds of honey to make one pound of wax. The producer of extracted honey, by saving his combs and having them filled several times each year for many years in succession, saves all the honey which would otherwise be used in making wax, and thus largely increases his annual honey product.

Moreover extracted honey can very easily be transported to any part of the world. It has but to be put into good barrels and it can go wherever railroad or steam-ship will carry it. It is injured by neither cold nor heat. It may be kept for months, or even years, without losing its good qualities. Hence it may seek a market the whole world around, in torrid or frigid zone.

These advantages are so evident that not a few bee-keepers are giving exclusive attention to the production of extracted honey. The production is already so large that some are beginning to fear that prices will fall very much. I am convinced that this fear is well-grounded. The prices of extracted honey will undoubtedly fall. Already the best honey can be bought for ten cents a pound. Once sugar was so expensive that it appeared only on the tables of the rich. After a time, improved cultivation and machinery rapidly increased the production of sugar. The increased quantity largely reduced the price. Pretty soon sugar began to appear on the tables of the poor, and its consumption increased enormously. When only the rich could buy it, enough to supply the demand was produced by a few planters and laborers. When the prices fell so as to bring it within the reach of the masses, the consumption increased so greatly that very large numbers of laborers were needed, and planters, though getting a small profit on each pound sold, were able to make large incomes because the market demanded a large number of pounds. Extracted honey will take the place of much of the unhealthful syrup and poor sugar that are now consumed, and a very large quantity will be needed to supply the demand. Then the bee-keeper, who now gets an income of five hundred dollars by the production of five thousand pounds of honey, can get an income of five thousand dollars by the production of one hundred thousand pounds.

Iowa City, Iowa.

For the American Bee Journal.

A Visit Among Indiana Bee-Keepers.

W. T. STEWART.

The second week in August I started for a two weeks' visit among Indiana bee-keepers. The first one that I visited was S. E. O'Neil, of Dupont, who has about 70 colonies of good Italians, and does not like Cyprians. He had a good fall crop of honey, and his bees winter on it with good results; he uses the Heddon case for sections and Jones' perforated-zinc honey-board, and likes both. Mr. O'Neil is a good bee-keeper.

I then visited Mr. J. M. Brooks, who has been breeding queens for beauty, but says he got them "bred up" so that they were above work and put on "airs," while he had to draw on the more common bees for honey enough to supply queen-cages to ship them with. Mr. Brooks is a scientific bee-keeper, and has a fine apiary. It being centrally located, he has a honey store in front and retails his honey at home.

I next went to Wesley Morgan's apiary, near Burnsville. He works mostly for extracted honey, and gets it, too.

Next, I called on Elias Morgan, a brother of Wesley; he has a small apiary, but is somewhat enthusiastic on bee-culture. All the above named are readers of the BEE JOURNAL.

Willis Gully, of Burnsville, has a small apiary, but is well up with the times in bee-keeping. The next was G. W. Vandergrift, of Vernon, who has a fair-sized apiary, uses the Mitchell hive, but does not give his apiary the attention necessary to make it profitable; besides that, Vernon is rather a poor location for bees.

I next visited Dr. C. C. Firth, of Wirt, and remained there all night. We talked about bees till a late hour. Dr. Firth is Secretary of the Southern Indiana Bee-Keepers' Association. He is well up in the knowledge of bee-keeping, and has a nice apiary, but he is young in practical bee-culture.

Frank Mayfield was next interviewed. He has a large apiary. His bees are all in box-hives, and he trusts to "luck" for surplus honey.

I next called on H. C. White, of Madison. He is enthusiastic, and has been successful, but his location is not good for honey.

I remained all night with Jonas McKay, near Vevay. Mr. M. is the big bee-man of the vicinity. He shipped eight tons of comb honey last year. His bees are mostly in bee-houses.

Chas. Cain has a bee-house, and a dozen others in Switzerland county have bee-houses, and I think that it is the best county in Indiana for bee-keeping.

Wm. Borcherding, near Madison, is an enthusiastic bee-keeper, and will rank high in the near future.

Mr. Augustine, of Madison, is another able bee-keeper, and will some day make his mark in scientific bee-culture.

All through my journey I was looking for a good location to which to move my bees, and found what I believe to be the best I ever saw, all things considered. I secured it, and the last week in August I shipped my bees (nearly 100 colonies) by rail and river nearly 100 miles. My loss in shipping was about 15 per cent. by combs breaking down and drowning the bees. I have learned a lesson on shipping bees, and at some future time I will give to those interested the benefit of my experience.

I am now located three miles west of Madison, Ind., on the Ohio river, above highwater mark, where I shall give bee-keeping my entire attention. My address hereafter will be Madison, Ind., instead of Eminence, Ky.

Madison, Ind., Nov. 8, 1884.

For the American Bee Journal.

Bee-Sting Poison.

B. F. LITTLE.

Having shown Dr. Horton the article by Dr. Tinker, he kindly furnished me the following opinion:

"Brush Creek, Iowa, Nov. 6, 1884.—I had my attention called to an article in the BEE JOURNAL, by Dr. Tinker, relating to my patient, Mrs. Sturdevant, who died from the effects of a bee-sting. I cannot agree with the Doctor in the way the poison is taken into the system. In the case referred to, I believe that the poison was injected into the circulation by the sting entering the *inferior palpebral* vein, the poison being carried from there into the facial vein, and from that into the *internal jugular* and directly into the heart. I believe that the poison acts much the same as that of poisonous reptiles. I reported the case to Prof. Laning, of the Hahnemann College in Chicago, and he also holds to my theory, citing Bollinger as the highest authority. The camphor treatment of which the Doctor speaks, I know nothing about; but in the other treatment to which he alludes, I quite agree with him. I consider iodine as the best antidote for bee-stings. W. H. Horton, M. D."

I think that my bees are going into winter quarters in fine condition. I began the season with 80 colonies, and now have 123. I run 90 of them for extracted honey, and obtained 7,200 pounds; the rest I run for comb honey, and got about 1,200 pounds. I have taken no honey since the basswood flow ceased; although I might have taken six or eight hundred pounds. It is in the combs yet; but for so nice a fall the honey-flow was wonderfully short.

Brush Creek, Iowa.

☞ The bee-keepers of McDonough and adjoining counties are requested to meet at Bushnell, Ill., on Nov. 20, 1884, for the purpose of organizing a bee-keepers' association.

J. G. NORTON.

Local Convention Directory.

1884. *Time and place of Meeting.*

Nov. 19.—Massachusetts, at Worcester, Mass.
J. G. Jefferda, Sec.

Nov. 25.—Western Michigan, at Fremont, Mich.
Geo. E. Hilton, Sec.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

1885.
Jan. 6.—Southern Wisconsin, at Janesville, Wis.
J. T. Pomeroy, Sec.

Jan. 14.—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

No Surplus Since July.

I began the season with 20 colonies, sold 12 in the spring, secured 550 pounds of honey from the 8 remaining colonies, and increased them to 15. Bees in this section did well during June and July, but since then they have produced no surplus honey to speak of. A. L. P. Loomis.○+
Rosendale, Wis., Nov. 6, 1884.

Poorest Season for 8 Years.

In the fall of 1883 I put into winter quarters 44 colonies of Italian and hybrid bees, and had 44 with which to begin the spring of 1884. I increased them to 61, besides selling 4 colonies, have obtained 1,000 pounds of comb and 200 pounds of extracted honey, all of it being somewhat dark, there being none of it pure, white clover, but, perhaps, a good deal of it is "bug juice." I got no fall honey at all, and, taking the season through, it has been the poorest season for honey that I have seen in the eight years in which I have kept bees in this locality. The Italian bees worked strong on the first crop of red clover, but what they got from it I do not know. Jacob Copeland.○+ 44—61.
Allendale, Ill., Nov. 6, 1884.

Unfortunate.

This week finds me a helpless man except that I can use my right hand. I became disabled in this way: I was at one of my neighbors on Saturday evening, and a little before 9 p. m. I started for home; and in order to hasten I ran, and had gone but a short distance when I came in contact with a tight, wire clothesline across my path, with such force (it striking me between the eyes) that I was brought to the ground with such violence that my left collar bone was broken. After some moments of groaning, I finally arose and reported to my neighbors the effect of the wire line. I was assisted to my home, a doctor was called, and the bone set (which is a difficult one to keep in place, as it cannot be splinted), and at this writing I am getting along as well as could be expected. I find it a hard stroke on all my fall work. Unless I can get assistance, I will have to do as some of our old fogies say, "Let the bees care for themselves or abide the consequences." This theory I do not believe in, for I think it just as essential to look after the wants of our bees as it is to look after the wants of our hogs and cattle. The honey crop through this section of Iowa has been quite short since the middle of July. There was a fine lot of fall bloom, and the frost staid off unusually late, too, but there seemed to be but little secretion of honey compared with what we generally have, so we got only a small surplus. I fear that many new colonies, and some which were extracted from the body of the hive in the latter part of the white clover honey-flow, will be short of stores, unless they are fed or evened up from those which have to spare. J. W. Sanders.⊙
Le Grand, Iowa, Nov. 6, 1884.

About Bumble-Bees.

Will Prof. Cook please describe the nature of the bumble-bee? Are there any drones among them in the nest? If so, what are their habits and nature? Can they sting?
Wm. Malone.♀
Oakley, Iowa, Nov. 8, 1884.

[Bumble-bees have the same kind of bees in each colony as do our honey-bees. The large queen lives over the winter, no others. So in early spring the lilacs, etc., are gay with the large queens, which now must do all the work. The queen gathers a great mass of pollen, and lays her eggs in it; from these, workers are developed, and later, queens and drones may be seen. So in August we find in each nest a large queen, many workers, several small, unmated queens, and several drones. When the first bees come forth in the spring from extemporized cells, caused by eating holes in the pollen, the bees wax these cells and so form the honey-cells. The queens and workers sting, not the drones.—A. J. Cook.]

Selling Extracted Honey.

I have just overhauled my 200 colonies of bees, and have equalized their stores. I left them very rich, about one-half of them three stories high when the honey-flow ceased, about June 25, since when, there has been no honey to store; and to my surprise I did not have to feed them, but on the contrary I took off and put away 900 combs containing various quantities of honey, from ½ of a pound to full, thick combs of 6 to 7 pounds. Just about one-half of my surplus combs had honey in them. I have packed my combs in my tin-lined evaporating-tanks and in dry-goods boxes, and have nailed them up tight to keep out the mice. By distributing "Honey as Food and Medicine," and the Leaflets, "Why Eat Honey," I have sold 6,000 pounds of extracted honey at home, but have 2,000 pounds yet on hand. I have realized, on an average, something over 9½ cents per pound. E. Drane.♂
Eminence, Ky., Nov. 10, 1884.

An Unfavorable Season.

This has been an unfavorable year for those of us who are engaged in producing honey in this section of the country. Our honey-flow lasted only about three weeks and that was when clover bloomed. During this time the bees worked hard, but the nectar ceased flowing as soon as the dry season set in, and as a result we got but little surplus honey. My apiary did not average over 13 lbs. of honey per colony, spring count. Many of my neighbors who have from 5 to 10 colonies, have not taken a pound of honey, and they say that their bees will die before spring for want of honey. I began in the spring with 28 colonies and have increased them to 63. All are now in good condition, excepting 3 colonies which I have been feeding.
Nathan M. Woodman+○
Bushnell, Ill., Nov. 12, 1884.

Getting Sections Completely Filled.

I notice on page 716, that Mr. Heddon is working out a plan to get sections completely filled with honey. I think that I have something new, at least it is new to me, and "it works like a charm:" Cut the comb foundation for the 4¼x4¼ sections, 3¾x4½, that will then give you ¼ of an inch to fasten the foundation on both ends, and the bees will have ¼ of an inch space on the sides, thus the comb foundation is fastened perfectly, and will not warp or drop down as it will sometimes in sections only half-filled with foundation. This plan works well without separators, and without reversing the sections. The bees will fasten the foundation all around and build it straight and solid.
John Rey.⊙
East Saginaw, Mich., Nov. 11, 1884.

Convention Notices.

☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.
W. B. Lawrence, *Sec.*

☞ Excursion rates from all points on the Chicago & West Michigan R. R. have been secured for the benefit of those desiring to attend the Western Michigan Bee-Keepers' Association, held at Music Hall, in Fremont, Mich., on Nov. 25, 1884. Certificates can be had by applying to Mr. T. M. Cobb, President, Grand Rapids, Mich., or to Mr. Geo. E. Hilton, Secretary, Fremont, Mich. Prominent bee men from abroad are expected, and an interesting time is anticipated.
Geo. E. Hilton, *Sec.*

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Winter Weight.

I read in the BEE JOURNAL of Oct. 29, that if bees are weighed and fed sugar syrup till the hive reaches the standard weight, there is no need of anxiety. I would like to know what the standard weight is, as I have some colonies which are very heavy, and some which are light. Can I even them up until each becomes the required weight? R. M. CARTNEY.
Rose Hall, Ont.

ANSWER.—The different materials of which hives are made and the different styles of hives vary so much in weight that I do not know of any standard weight that is a safe guide to go by, to warrant a sufficient amount of stores for wintering.

Feeding Bees, etc.

Will Mr. Heddon please answer the following questions:

1. How many pounds of honey or sugar syrup does it take to winter a strong colony of bees? and how many pounds to winter a weak colony?
2. How many ½-full Langstroth frames does it take for a colony of bees to winter on?
3. Is it best to boil sugar syrup before feeding it to bees?
4. Is there any harm in putting more water with the sugar than is generally used?
5. Which is the best way to feed bees?
6. Do bees work on warm days in winter when they fly out, or do they only take a cleansing flight?
7. What kind of bees are the best for increase? A. V. LENNOX. ♀

Plaquemine, La.

ANSWERS.—1. That all depends upon the healthfulness and quietude of the bees during their confinement and what you mean by wintering. It requires more food to carry the colony from the cessation of the honey-flow of 1884 to the beginning of the honey-flow of 1885 than just to carry them through from flight to flight. How much more, will depend upon the prolificness of the queen, and many other conditions. In most winters, not as much food will be consumed by colonies in frost proof repositories, as those left on the summer stands, packed or unpacked. I usually wish my colonies out-of-doors to have about 20 lbs. of stores, and those in the cellar, not less than 10 lbs. and these stores all available. These will reach until such time in the spring as I can feed any colonies that may have eaten an unusual amount.

2. Sometimes one or two, and sometimes seven or eight.

3. Yes, I think so; especially if fed later in the season.

4. No, not if you feed early enough, so that the colony has a chance to evaporate the extra water out of the syrup.

5. My preference is radically in favor of a large feeder on top.

6. Generally, only a cleansing flight; though sometimes later in the winter, they begin house-cleaning.

7. Italians for increase, and Germans for nice comb honey.

Bees Dying Fast.

I have two colonies of bees which are affected in a manner that is unaccountable to me, and I desire information in regard to what is the trouble with them, and also for a remedy. The appearance of the outside of the capped honey is gray—about the color of mold—though the honey appears to taste all right. The comb and the hive are dry and emit no bad smell, but the bees are dying faster than they can carry them out. The colonies were strong in bees and heavy with honey. ROBT. HENDERSON ♂
Ogdensburg, N. Y.

ANSWER.—I do not think that anything ails your two colonies of bees referred to. The bluish gray tinge on the caps of the honey is all right. I *presume*, from all you say, that the mortality of these two colonies is natural, and a circumstance often seen in other apiaries.

Bee-Feeders, Honey-Boards, etc.

Will Mr. Heddon please answer the following questions:

1. In uniting black bees in the fall where one has not the time to find and destroy one of the queens, and they have to "fight to the death," I would like to know whether the survivor is injured in any way. Are both ever killed?
2. Please describe your top bee-feeder.
3. What is the thickness of your honey-board, the distance between the slats, and how much bee-space is there above and below?
4. In cellar-wintering, what should the outside temperature be, when the bees might safely be set out for a flight; of course to be returned to the cellar when all have gathered home?
5. Is it possible to cure bee-diarrhœa, when not too far advanced, by setting a single hive in a warm, dark room for a short time?
6. How is the common basswood propagated? WM. JNO. HINCHEY.

Tamworth, Ont., Nov. 1, 1884.

ANSWERS.—I have never known any injury to the surviving queen, from such struggles for life. I think the fatal position is such that fatality cannot happen to both queens at the same time.

2. To describe such fixtures so that the description would be of any value, would occupy too much time and space.

3. The same is also true of this question. I prefer a scant ¼ inch for a bee-space where there is no liability of a change coming about by way of swelling or shrinkage.

4. Much depends upon the stillness of the air, whether the ground is bare or covered with snow, whether the sun shines or not, and what is the humidity of the atmosphere. Usually 45° to 50° Fahr.; but my rule is, never to take bees from a repository expecting to return them unless they show signs of diarrhœa.

5. Some claim that they have now and then cured one or a few colonies by so doing, and changing their food. I do not consider that there is any real, practical cure, but I think that we shall soon learn how to prevent the disease.

6. By seeds and slips, but usually by seeds.

◆

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Nov. 17, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—There is an unsatisfactory demand for extracted honey from manufacturers, while there is a fair inquiry for small packages of clover honey such as dime, ½-lb., 1-lb., and 2-lb. jars, from the retail trade. Prices are low as arrivals exceed the demand. Extracted honey brings 5@9c. on arrival; choice white comb honey is in fair demand and sells best in 1-lb. sections. It brings 15@16c. in the jobbing way. We have several small lots of dark comb honey from parties in Illinois, and offered it as low as 10 and 11 cents per lb, without finding a buyer. Dealers most certainly mislead producers by quoting buckwheat and poplar comb honey, if they are not more successful than we are in disposing of the same.

BEESWAX.—The demand is slow and arrivals are few. Good yellow brings 26@27c. on arrival.

C. F. MUTH, Freeman & Central Ave.

NEW YORK.

HONEY—As we have already commenced receiving consignments of this year's crop of honey, we feel safe in making the following quotations: Fancy white comb, 1-lb, 18@20c., 2-lb, 16@18c.; fair to good, 1 and 2-lb, 14@16c.; fancy buckwheat, 1-lb, 12½@13c., 2-lb, 11½@12c.; ordinary grades of dark, 1 and 2-lb, 11@11½c. Extracted white choice, in kegs or small barrels, 8½@9c., buckwheat, 6½@7c.

BEESWAX—Prime yellow, 30@31c.

McCAUL & HILDRETH, 34 Hudson St.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—A rather quiet market has been experienced this week. The market for desirable grades is steady at same values. White to extra white comb, 9@10c; dark to good, 6@8c.; extracted, choice to extra white, 4½@5c.; dark and candied, 4c.

BEESWAX.—Wholesale, 24@27c.

STEARNS & SMITH. 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. KENDEL. 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

GEO. W. MEADE & CO., 213 Market.

KANSAS CITY.

HONEY.—The market is quiet and unchanged, with good demand and liberal receipts. Comb, ½-lb. sections, none in the market. They would bring 18c.; 1-lbs., 14@15c.; 2lbs., 13@14c. The above figures are for choice stock in regular shipping crates. Dark or large combs in rough crates sell slowly at 9 to 10c. Extracted, California, 6@7c.; white clover, 7@8c.; Southern, 5½@6c.

BEESWAX.—None in the market.

CLEMONS, CLOON & CO.
Successors to Jerome Twichell.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

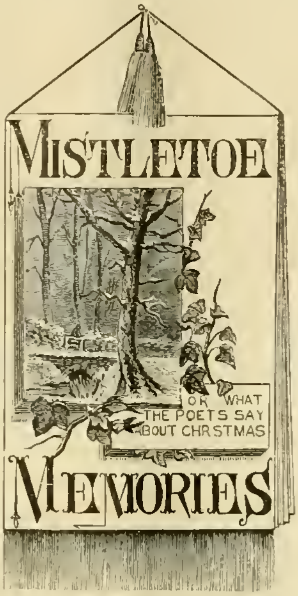
BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

A Christmas Present.

To every person who sends us one NEW subscription, (besides his own renewal), for one year, for the Weekly BEE JOURNAL, or 4 NEW Monthly subscribers, for a year, we will send as a present, by mail, postpaid, a copy of "Mistletoe Memories, or What the Poets say about Christmas."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OR WHAT THE POETS SAY ABOUT CHRISTMAS
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☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in Adrian, Lenawee Co., Mich., on Dec. 3, 1884, in Plymouth Church Chapel. All bee-keepers are cordially invited to attend, and bring with them anything for exhibition that will be of any use or benefit to bee-keepers. Let all turn out and have a good time.

A. M. GANDER, *Sec.*
F. W. GILBERT, *Pres.*

Young Men!—Read This.

THE VOLTAIC BELT CO., of Marshall, Mich., offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred, as thirty days trial is allowed. Write them at once for illustrated pamphlet free. 6D1y

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It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

We have had some bound in Russia leather, with colored edges—price 60 cents.

☞ To all new subscribers who send us $2 for the Weekly BEE JOURNAL next year, we will send the rest of the numbers of this year *free* from the time the subscription is received at this office.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly BEE JOURNAL for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

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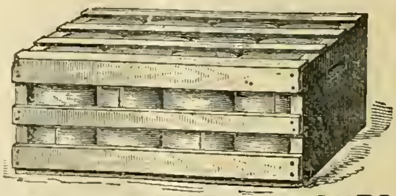

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Editor of the Weekly Bee Journal.

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It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

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For Bees, Queens.

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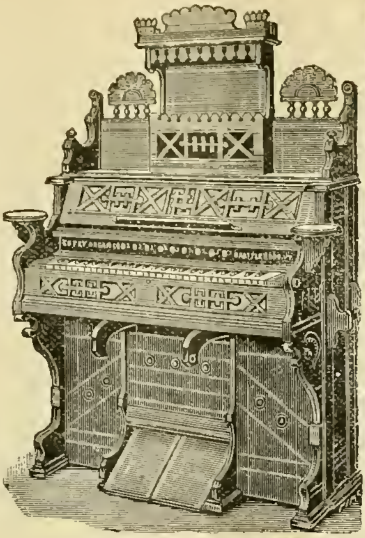
1AB1y Lock box 995. Belleville, St. Clair Co., Ills.

SEND FOR IT.

We have just issued a new four-page circular that will interest any bee-keeper. Send your name on a postal card for it.
44Atf HENRY ALLEY, Wenham, Mass.



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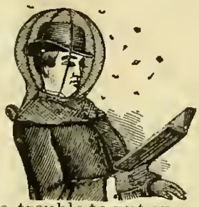

There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

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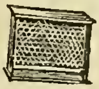

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine. 4A1y

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & Co., Portland, Maine. 4A1y

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65 *ENGRAVINGS.*

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BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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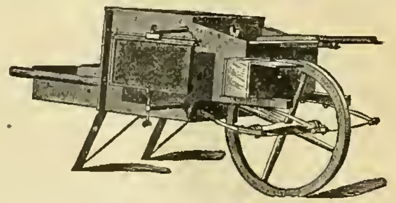

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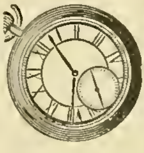

We will send you a watch or a chain **BY MAIL OR EXPRESS**, C. O. D., to be examined before paying any money and if not satisfactory, returned at our expense. We manufacture all our watches and save you 30 per cent. Catalogue of 250 styles free. Every Watch Warranted. Address

STANDARD AMERICAN WATCH CO.,
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THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published SEMI-MONTHLY, at Seven Shillings per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**
LONDON, ENGLAND.

We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.00 a year.

1868. 1884.

HEDDON'S COLUMN.

WAX ON SHARES,

For Comb Foundation for 1885.

Why not send me your Wax NOW to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

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I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

Here we have three surplus honey crops: First, from white clover; second, from basswood; third, from myriads of fall flowers.

I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

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OR MADE UP COMPLETE,

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INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,

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I pay **25c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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A PRIZE. Send six cents for postage, and receive free, a costly box of goods which will help you to more money right away than anything else in this world. All of either sex, succeed from first hour. The broad road to fortune opens before the workers, absolutely sure. At once address, TRUE & Co., Augusta, Maine. 4A1y

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Pure Italian Bees and Queens

For further information, send for Circular.
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is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

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Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
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Send for Samples & Reduced Price-List.
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PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired-Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

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Square Glass Honey Jars, Tin Buckets,
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ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., November 26, 1884.

VOL. XX.—No. 48.

THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **50 cents.**

Entered at the P.O. as Second-Class matter.

TO CORRESPONDENTS.

The Subscription Price of the Weekly BEE JOURNAL is **$2.00** a year; and of the Monthly, **50 cents** a year in advance. New Subscriptions can begin at any time.

Club Rates for the Weekly are: $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

Club Rates for the Monthly are: two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70: five copies for $2.00; more than five copies for 40 cents each.

Sending Money.—Remit by Express, Post Office Order, Postal Note, or Bank Draft on New York or Chicago. If neither of these can be obtained, Register your Letter, affixing stamps both for postage and registry, and take a receipt for it; or send it by Express. Money, sent as above described, is AT OUR RISK, otherwise, it is not. Do not send checks on local banks, which cost us 25 cents each, at the banks here, to get them cashed.

Silver should never be sent in Letters. It will either be stolen, or lost by wearing holes in the envelope.

Postage Stamps of any denomination may be sent for fractions of a dollar: or where Money Orders, cannot be obtained, stamps for any amount may be sent.

Subscription Credits.—The receipt for money sent us will be given on the address-label of every paper. If not given in two weeks after sending the money, write to us, for something must be wrong about it. Do not wait for months or years, and then claim a mistake. The subscription is paid to the END OF THE MONTH indicated on the wrapper-label. This gives a continual statement of account.

Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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☞ We have received the "Second Annual Price List of the Victor Hive, Syrio-Albino Queens, and Apiarian Supplies, of Dr. G. L. Tinker, New Philadelphia, O.;" 24 pages. This is the first catalogue for 1885 we have received.

* * *

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly BEE JOURNAL for one year at $1.25 for the two. This is a rare chance to obtain two good papers for about the price of one.

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20 cents per line of space, each Insertion.

For either the Weekly or Monthly Editions.

A line of this type will admit about 7 words. ONE INCH will contain TWELVE lines.

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TO CORRESPONDENTS.

Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

To Canadians.—We take Canadian money for subscription or books; and Canadian postage stamps may be sent for fractions of a dollar.

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E. L. ARMSTRONG, Jerseyville, Ill.
ARTHUR TODD, Germantown, Philadelphia, Pa.
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and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY,

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

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5AB1y HAMILTON, Hancock Co., ILL.

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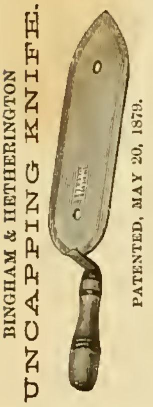
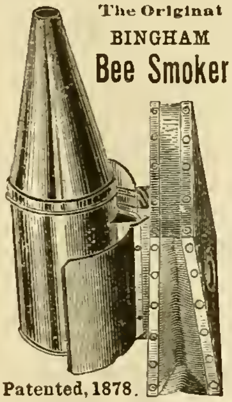

BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



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Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

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Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker..................	2 " ..	1 00
Little Wonder smoker..........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch..................		1 15

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The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50 cents.**

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or **$8** per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

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THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

World's Exposition Honey Show.

The World's Exposition opens at New Orleans, La., on Dec. 1, 1884. Under the "Apiary Exhibits" heading, we notice, in the Premium List, the following list of premiums:

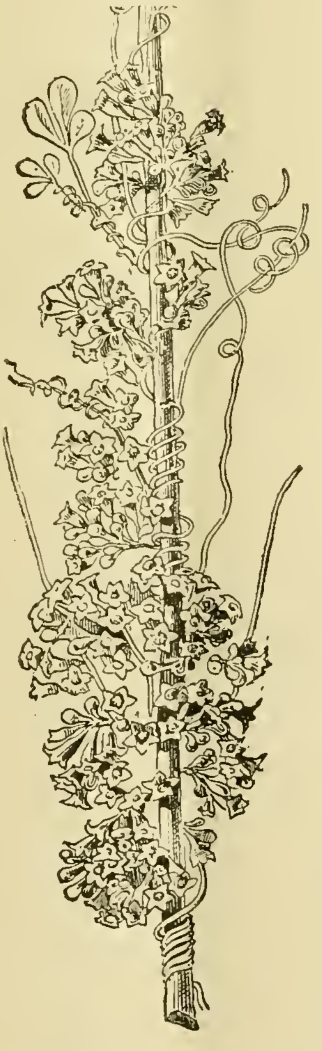
	1st Pm.	2d Pm.
Class 81—Colonies.		
For the best colony of Italian bees in working order, and in an observatory hive with movable frames	$25	$15
For the best colony of Cyprian bees in working order, and in an observatory hive with movable frames	25	15
For the best colony of Syrian bees in working order, and in an observatory hive with movable frames	25	15
For the best, most varied exhibit of foreign bees or their descendants, having the most distinct markings according to race	25	15
Best exhibit of native or black bees in an observatory hive with movable frames.	25	15
Best exhibit of queen-rearing in nucleus observatory hive	25	15
Best and most extensive collection queen bees, any race, caged so as to be capable of observation, with retinue of bees	25	15
Class 82—Honey.		
Not less than 50 lbs. each sample.		
Best and largest collection of comb honey	$15	$10
Best 6 two-pound sections, or best 12 one-pound sections	10	5
Best and largest collection of extracted honey	10	5
Best 12 two-pound or 24-pound glass jars, extracted honey	10	5
Class 83—Hives. Manufacturers' Exhibits		
Best movable frame for general purposes, summer and winter	$20	$10
Best manufactured of straw, fully equipped with movable frames and sections	15	10
Class 84—Manipulations.		
For the most skillful transferring of bees, comb and honey from a bee-hive or straw skep to a movable frame hive, at the same time capturing and exhibiting the queen in the presence of judges	$20	$10
For the most skillful manipulation of the interior of a populous hive, in presence of the judges	10	5
For the most skillful extraction of honey from comb without injury to the brood.	10	5
Class 85—Implements and Beeswax.		
For the most complete collection of apiarian tools, fixtures and implements	$30	$20
For the best honey extractor, to be tested in presence of the judges	10	5
For the best collection of beeswax in shape for apiarian and commercial purposes, obtained from comb made by exhibitor's bees	10	5
For the best wax extractor, to be tested on old comb in presence of judges	10	5

Mr. Paul L. Viallon, Bayou Goula, La., will send a copy to any one on application.

Dodder—A Parasitic Honey-Plant.

For the following information concerning this interesting plant, we are indebted to W. A. Pryal, of North Temescal, Calif.:

The dodder, of which the accompanying sketch is a true representation, is a parasitic plant, many varieties of which are found in different parts of the world. The one here shown is known as *Cuscuta racemosa*, and is found in many of the alfalfa fields of California, to which place it was originally brought in imported Chilli alfalfa seed. It grows surprisingly fast, and from a single tiny seed a whole alfalfa field will become its prey. It is an exceedingly profuse bloomer, flowers of a yellowish white, and delightfully fragrant.



Bees are perfectly eager to get at its blossoms, and they do not have to fly from one bloom to another, but simply do all their work on foot, as the vine and flowers form a perfect mat all over the ground, so that the bees can "step" from one blossom to another. It is quite amusing to watch bees working upon this curious plant. At times they may be seen crowded together so closely that one would think they were endeavoring to make their way into a lot of honey-cappings. Its time of greatest efflorescence is during the fall.

On account of its being destructive to alfalfa, it will never be cultivated as a honey-producing plant, although it is rich in nectar.

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Premium for Club of 10 Subscribers.

The book for every farmer is the one entitled "Affleck's Farmer's and Planter's Record and Account Book," in which there is the most systematic, complete and convenient arrangement of headings for every Farm Account and memoranda of all important events which may occur in connection with his business. Every progressive farmer certainly desires to make a success of his occupation, and should adopt every possible means of bringing about that result. He, then, should have a correct knowledgo of his entire business, which he can have only by keeping a correct account of every crop produced on his farm, the cost of production of all his live stock and an itemized account of all his expenses. Then at the close of the year, when he takes off his balance sheet, which is admirably arranged in the book above referred to, he will be able to see at a glance whether his farm does or does not pay.

This valuable book contains 166 pages, is nicely printed on writing paper, ruled and bound, and the price is $3.00. It can be sent by mail for 24 cents extra.

We can supply these books at the publisher's price, or will make a **present** of one copy for every club of TEN subscribers to the Weekly BEE JOURNAL for one year, with $20. Four subscribers to the Monthly will count the same as one for the Weekly.

Now is the time to get up Clubs. Who will work for a copy of this valuable book?

CORRESPONDENCE

For the American Bee Journal.

The Carbonic Acid Gas Question.

S. CORNEIL.

On looking through the back numbers of the BEE JOURNAL for the current year, I notice that some of the contributors are in error in regard to the carbonic acid gas produced by the respiration of a cluster of bees. I refer to the articles of Messrs. J. F. Latham, page 342, Warren Pierce, page 408, Levi C. Johnson, page 585, A. H. Dutton, page 629, and Rev. W. F. Clarke, page 438.

These writers seem to think that because carbonic acid is more than half as heavy again as air, it falls to the bottom of the hive, and that provision should be made for getting rid of it at that point. It is true that it would so fall, if it were of the same temperature as the air in the hive, and if it were not mixed with other gases, some of which are very light. The air exhaled by the bees is saturated with aqueous vapor for instance, the specific gravity of which is only ⅝ of that of ordinary air. Then the respired air is several degrees warmer than the air in the hive. Owing to these circumstances the carbonic acid will rise with the other gases at first, but will afterwards diffuse evenly through the air in the hive, if no provision has been made for its escape at the top. In any event it will not separate and fall to the bottom. It seems that when gases are once mixed they remain so, no matter what may be their relative specific gravities. On this question the leading scientists are agreed. Huxley says: "If we shake up a mixture of liquids of different densities—say mercury, water and oil—the liquids soon settle down after agitation, in the order of their relative weights, the heavy quick-silver sinking to the bottom, and the lighter oil floating on the top of the water. Such a separation does not, however, take place when gases of different densities are mixed." On page 69 of the BEE JOURNAL for 1883, the carbonic acid gas question is discussed at some length. The evidence there produced is conclusive that the carbonic acid of respiration diffuses equably through the air of the room. Lower ventilation has its advantages, but they do not depend upon the density of carbonic acid gas.

On page 693, H. W. S. gives one of the best plans there is for ventilating hives in winter. The principal reason why bees get sick in winter quarters, is because the air in the hives becomes damp and impure from respiration, and the remedy is to change the air without perceptible draft, and without reducing the temperature of the cluster. Instead of using cotton wool, however, I use carded sheep's wool. It is, perhaps, the only substance available, which, while conducting only the minimum of heat, permits that free escape of the products of respiration and transpiration, so essential to the perfect health of the bees.

Count Rumford's experiments on the conductivity of substances used in clothing, show that, while a warm body, wrapped in cotton, cooled to a certain degree in 17½ minutes, 22 minutes were required to cool it to the same degree, when wrapped in the same bulk of sheep's wool; and Pettenkoffer found that the capacity of wool for absorbing moisture is more than double that of cotton wool. Every one knows that in his own case woolen garments are better than cotton for retaining heat and carrying off perspiration. If H. W. S. will pack a few of his colonies with sheep's wool, I venture to say he will find that the consumption of honey will be less, if wintered outside, or in a cool temperature inside.

The only other point which I desire to mention is that the combs should be raised above the bottom board by placing a rim under the hive, or if the bottom is nailed, by suspending the combs in a rim placed on top, because sometimes dead bees fall to the bottom and accumulate in the spaces between the combs, preventing a free circulation of air through the hive.

With his bees prepared thus, the bee-keeper may "sleep easy" about the pollen question. No matter how much pollen may be in the combs, the bees will eat no more of it than is good for their health, and they will come through safely, in any place, where bees should be expected to winter.

Lindsay, Ont.

For the American Bee Journal.

The Apicultural Outlook.

JAMES HEDDON. ♀—460.

There is not so much difference between the opinions held by myself and J. E. Pond as there was; not so much as he imagines there is. His article on page 731 induces me to believe that he thinks more of the pollen theory than he formerly did. Also that he errs greatly concerning my views upon the subject. Had he read my articles upon the subject carefully before he began commenting upon them, I cannot see how he could make the statement that "to day I am sure." Have I not all the time said that it was a theory in which I fully believed, and that I did not claim to know; that I was seeking more light on the subject, and was always open to conviction? For this conservatism, did not Mr. Fradenburg set up the "priority" claim and Dr. Mason get out of patience with me? Each year brings forth new evidences to make me feel surer of the correctness of the theory; but still I do not yet say "*I know,*" nor shall I until I *do* know. Mr. Pond cannot have read correctly.

But of what good is it to safely winter our bees if their product will not bring the cost of production in the open markets of the world? On page 728, I find the lament of Mr. Kendall; Mrs. Harrison and Mr. G. M. Doolittle having already put in theirs. For years I have feared this state of things. Mrs. H. and Mr. K. charge the bad condition of affairs to reckless producers and adulteration. Mr. Doolittle places it where it belongs, as I see it, viz: to supply and demand.

If the bee-keepers of this country had said nothing about adulteration in the past, scarcely any consumer would have dreamed of any such thing as bogus honey. All the cry has done nothing to stop the increase of the amount of honey offered to the public by the way of adulteration.

It is no less true with our business than with all others that "honesty is the best policy;" and any system which is wrong, will finally kill itself. The quieter we remain the sooner the death will occur. Just as sure as a bee-paper contains a report of a large yield of honey somewhere in the United States, or a case of the discovery of a few pounds of adulterated honey, many of the different agricultural papers of our country will copy the wonderful statements, and thus do ten times more in adding to the production of our goods than all that is done by adulteration. They also detract greatly from the consumption by uselessly frightening consumers. The result is, that the greatest sufferers are the producers of pure honey. Some way or other they never copy from our papers such an article as that able one of Mr. Doolittle's on the cost of honey-production. Any honey-producer, at all familiar with the natural channels of trade and the conditions affecting the same, must have known what was coming.

Allow me to predict that organization will not stop this condition of affairs. Ignorant and unscrupulous supply dealers and enthusiasts will be sure to push the thing to a legitimate re-action, and no shouts of adulteration, nor efforts to organize against it will do us aught but harm.

Well, what shall we do? and what is the outlook? The outlook is all right. My stock in this business has not, and will not depreciate in the least. All the combined forces at work against our interests as producers, cannot prevent our receiving the full benefit of the laws of action and re-action. "After clouds, sunshine; and "He who produces at maximum cost will fail, and he who produces at minimum cost will succeed."

If you wish to hasten the day of re-action, say no more about adulterated honey; tell no more about what a lucrative business honey-producing is; tell the truth, that all dabbling with bees results in loss, as regards honey-producing; that farmers, carpenters, and small children, together with invalids and widows, can buy their honey cheaper than they can produce it; advise all to keep out of the business unless they have natural qualifications for it, and propose to make it a SPECIALTY, and locate in a field entirely unoccupied by any other. Withdraw your patronage from all bee-papers and supply dealers who are working against your interests, by inducing all classes to attach apiculture to their other business.

To any man who is trying to increase the surplus honey crop of our country by aiding those already in the business to secure larger and better yields, I extend the right hand of fellowship; but to those who are trying to increase the number of producers of this already fully-supplied luxury, I have nothing to offer but pity for the mistaken, and contempt for the designing.

I advise all who mean only to dabble with the business, to abandon it; and all those who wish to embark in it as a business, to have no fears, but go right ahead.

Dowagiac, Mich.

New Jersey and Eastern Convention.

The New Jersey and Eastern Bee-Keeper' Association assembled in the Cooper Institute building in New York City, on October 29, 1884.

The meeting was called to order by the President, Joseph H. M. Cook. The Secretary reported that he had received neither the roll of membership nor minute book from his predecessor, and was, therefore, unable to report, except as to what took place at the last meeting, and with which all the members were familiar, having seen it published in the April number of the *Bee-Keepers' Magazine* for 1884, commencing on page 84, which report was accepted and ordered to be placed on the minutes.

The Treasurer was absent, but having sent his report to the President, the same was read and accepted.

No programme had been prepared for the convention. Mr. A. J. King stated that the condition of the Association to-day was due to the neglect of the officers in not doing their duty, excepting, however, the President, who was always on hand.

The President explained that other duties had probably prevented him from giving all the time necessary to the success and for the benefit of this Association, and that he was ready to share his part of the blame. He then delivered a short address, saying that the past year had shown him something that he had not been aware of before; he had lacked faith, but this year had convinced him that there was no ground for this lack of faith, and that he was now satisfied that New Jersey can rely on bees producing a good crop of honey, and that the bee-keeper had an equal chance with the farmer in the raising of any particular crop. The farmer had only this advantage: That he was not relying on any particular crop, and that while his corn may fail, his potatoes would be a success. Bee-keepers do not receive that profit from their bees, because they do not qualify themselves for the profession—for such it must be considered; but if they do this, they will adapt themselves to it and will realize the greatest possible profit. The season with him had been a prosperous one. He had received 2,500 pounds of comb honey and about 500 pounds of extracted honey from 40 colonies.

The taking up of miscellaneous business was recommended, and discussion arose as to the method of answering questions, whether some should be appointed for the purpose or have them answered by any one having had experience bearing upon the point enquired about. The latter method was adopted.

Mr. Blauvelt: "Is it practical, and, if so, is it of any benefit to reverse the frames in the hives? Will it not cause the honey to run out?

Mr. Dean said that he had never heard any objections regaring the running out of honey, but thought that the reversing of frames would cause the bees to fasten the comb more substantially.

Mr. King said that the reversing of frames was for the purpose of having the honey stored in the top of the frame, placed in the bottom for the purpose of having the bees carry it into the surplus boxes.

Mr. Dean; I have heard the statement repeatedly from bee-keepers, that in feeding bees with honey for the purpose of storing, it would lessen from one-third to one-half.

Mr. King said that this loss was due to the rearing of brood; but in reversing the frame, the brood being already in it, but placed in the top of the frame, the bees would not, therefore, store the honey there, but would carry it into the top boxes.

Mr. Vescelius said that feeding was generally done when there was a lack of honey; this accounted for the loss.

The President thought that he would make reversible frames if he had practical knowledge of using them in the spring, when we have the apple blossoms; and, considering the small number of bees in the hive, they would bring in a large amount of honey during the day, and having at this time only a little brood, they will fill all the empty cells in the top of the frame, and we will find about two inches of solid honey in the top; then comes the benefit of reversing the frame. He had tried it with a few hives, and found in reversing the frames, that it started the bees in the boxes. He said he considered reversible frames a step in advance in bee-culture.

Mr. Samuel Miller explained on a black-board how these frames might be made, and stated that the reversible frames would prove a success, and that more honey could be obtained from a single colony by their use, but he thought that the best way to get a good return was to choose a good locality and have more colonies and give them less attention, than to have less colonies and give them much attention. He said he knew of some bee-keepers who get from 50 to 60 lbs. of honey from a colony, and who gave them but very little attention.

Mr. Dean said that he thought that if an extractor were used there would be no need of reversible frames.

Mr. King said that Mr. Dean had struck the key-note. Extracted honey was taking its stand in the market and that considerably more honey could be obtained from a colony by the use of the extractor, and there was no cause to worry ourselves about reversible frames.

Mr. Miller: How would you extract honey from the brood-chambers?

Mr. King: It is my experience in a good-sized hive, to extract from the outside combs and replace them in the center of the hive, and in this manner keep the brood-chamber in good condition.

Mr. Vescelius said that reversible frames would be of no benefit to him; that he must extract from the brood-frames, or else he would have no bees to gather honey, for they would fill every cell with honey, and crowd out the queen which would have no place to lay her eggs. He thought that an extractor was an actual necessity to the bee-keeper.

Mr. Terraberry: Bee-keeping is a business that a person may engage in profitably, provided he has an average locality. My honey crop this season has been very light. The month of May, with us, was very cold. June warmed up at once and came out very dry. White clover bloomed and dried right up. My plan of management is about the same as that of other practical bee-keepers. I do not think it advisable to equalize brood too early in the spring, but do it later in the season—on the approach of white clover. I secured some honey from apple blossom; after that, from raspberry. I believe in, and practice swarming by division. Out of an increase of twenty-five, I have had only one natural swarm. In making new colonies, I take a frame from several hives, rear queen-cells in full colonies, and transfer to a new colony or nuclei. I use two kinds of hives, a chaff hive with one tier only, and another when I tier the boxes. I do not use side-boxes, except early in the spring, and when they are drawn out and partly filled, I transfer them to the top—bees and all. I use foundation in both brood-nest and surplus boxes. I never practiced "feeding back," except in one hive, which I had in my store window, but found that it did not work well. I do not believe that they will store in boxes, all the honey fed to them. I have some of all kinds of bees in my apiary. I aim to keep pure Italians, but black bees will sometimes come in. I do not see any very great difference in their honey-gathering qualities, but I prefer pure Italians. I started my apiary with the old-fashioned brown bees, but could not succeed as well with them as I do with the Italians. I consider that it is necessary to study the bloom and get bees ready for it. Where natural swarming is resorted to, I would not place boxes on immediately after hiving, but would wait a few days, unless I had two or three combs to give them in which to store pollen and start the queen to laying. I do not use any drone-excluders, except in that I use foundation with worker-cells. I rear no more drones than are necessary. If I had a colony which had only fifteen pounds of honey in the hive, I would feed immediately so they could store it. I have wintered a colony fed on syrup as late as the middle of November. I do not use a queen-excluding board between the frames and section-rack. I use both wooden and tin separators and find no difference. I have tried without separators to my sorrow. I do not allow natural swarming if I can prevent it. I have my apiary about 300 yards from my store, but connected with a telephone. I winter my bees on their summer stands, and contract the entrances in cold weather.

Mr. Vescelius: The first thing that I did to produce a crop of honey, was to rear plenty of bees. This I did by breaking the caps from the honey of outside combs and placing them in the center of the hive and starting the queen to laying. I got but little from white clover. There was no honey in my hives on August 1, but shortly afterward the buckwheat crop came on and I commenced to extract and have taken from 13 colonies, spring count, over one ton of extracted honey and have increased them to 35 colonies. I set some frames aside in the early part of the season, the honey of which is not so nice, and on these I propose to winter my bees. My hives to-day are full of bees, all owing to constant extracting.

Mr. King said that what Mr. Vescelius had said, proved that if the bees are in good condition, they will gather sufficient honey if the harvest lasts only a short season, and prove profitable to the bee-keeper.

Mr. Vescelius: I will now give you the other side of the question. I have a neighbor who has movable frames. I have, on various occasions, given him advice. He has nine colonies, and his honey crop, this season, amounts to about nine two-pound cans of squeezed-out honey. He does not believe in extracting, but considers it too expensive.

Mr. Waite: Are queen-excluding boards necessary?

President: I have had no experience but I do not believe in using them.

The Secretary announced that he would be absent during the winter months; that he was going on a pleasure cruise through the Southern States and would not probably be able to attend to the duties devolving upon him as Secretary.

It was, on motion, ordered that a committee be appointed to call upon Prof. J. Hasbrouck and obtain from him the roll of membership of this Association, and also the minute book and minutes of its former proceedings.

The President appointed Mr. A. E. Cunkey, as such committee.

Considering that the proper officers had failed to prepare a programme for the use of this convention, it was, on motion of Samuel Miller, ordered that the President, with the assistance of any one whom he may choose, prepare a programme for the next session of the convention, and to notify the members of the Association by postal, of its next meeting, and see to it that the room is opened at the proper time in the morning for its next session.

The President named Mr. A. E. Cunkey to assist him in that work, on account of the absence of the Secretary.

The meeting was then adjourned.

JOHN ASPINWALL, *Sec.*
J. H. M. COOK, *Pres.*

Read at the Rochester National Convention.

Wintering Bees.

REV. W. F. CLARKE.

The subject of wintering bees is in a chaotic state. It is like the primeval earth, "without form, and void, and darkness is on the face of the deep" places in the ground to which so many apiarists consign their colonies for burial from four to six months of the year. But, as at creation's dawn, there were already subsisting elements which only required the birth of light and the wand of order to transform chaos into paradise, so,it is believed, we have the requisite data out of which to construct a theory of wintering bees, which only require intelligent application to prevent our apiaries from being transformed into charnel-houses and cemeteries by the advent of cold weather.

Our best bee-keepers frankly admit that as yet we have developed (?) no absolutely safe and sure method of wintering bees. The directions given in our apiarian manuals only encourage the *hope* of successful wintering, in case they are followed to the letter. They make no definite promises. There is no method before the public which has not proved fatal during some seasons and under certain circumstances. Some of our leading spirits in apiculture, who seem to have mastered every essential point in summering their bees to the best advantage, are still only experimenting in the matter of winter management. When we find men like Hutchinson of Michigan, and Doolittle of New York, "trying their luck" with such devices as "clamps" and coal-oil furnaces, only to lose a large proportion of the colonies thus treated, we may be sure that wintering bees has not yet risen to the dignity of one of fixed or exact sciences.

Now and then a bee-keeper starts up and tells us that he has no difficulty whatever in this respect, and can winter bees as easily as he can winter cattle or sheep. He crows lustily for a single summer, but the next season we hear nothing from him; he has failed, and very naturally does not like to tell his losses. He quietly repairs them by purchase, and so keeps his apiary up to its numerical standard, but sings low thereafter as to the ease with which the winter difficulty can be conquered. Our frank and honest bee-keepers who make a clean breast of it in confessing their failures, occupy the front rank among us both as *men* and as *bee-keepers*, and are deserving of all praise for disdaining to sail under false colors. Let us own that, as yet, we are all of us only learners in regard to this subject, and that not one in our numerous ranks is entitled to write M. A. after his name—Master of Arts, or Master of Apiculture, for want of proficiency in this most perplexing art of wintering bees.

While almost every other branch of bee-keeping has made wonderful progress during the past twenty years, wintering has been at a stand-still. A reference to the bee-papers of twenty years ago, will show that about as much was known on this subject with certainty at that period as now. No more despair could have been expressed then, than was uttered by Mr. H. S. Hackman in the AMERICAN BEE JOURNAL of April 23, 1884, who, after detailing heavy losses under various plans of management, sums up all by asking: "So what do we know about wintering bees?"

It is, I hope, with becoming diffidence, and most certainly without any assumption of superiority, that I venture to propound a theory, which I firmly believe will prove the Ariadnean clew to guide us out of the labyrinth of winter difficulty in which we have been so long bewildered and entangled. It seems perfectly clear to my mind that all our trouble is traceable to the fact that we have overlooked a principle or law of bee-life, not wholly unknown to us, but whose vital importance to the matter in hand, we have hitherto failed to recognize and appreciate. I refer, of course, to HIBERNATION, a word with which my name has been conspicuously connected for some months past in the bee-periodicals. Doubtless it was on this account that our worthy Vice-President, L. C. Root, requested me to address this meeting on the time-worn, hackneyed, threadbare, but yet unexhausted theme of wintering bees. I am glad of the opportunity to broach my theory before this august apicultural assemblage, for such it may without any flattery be called. It is the supreme court of bee-keeping on this Continent, and before such a tribunal by which the utmost impartiality and the highest judicial acumen may be expected to be exercised, I have much pleasure in submitting a statement of my case.

Hibernation is a term often employed in general literature to express the simple idea of passing the winter, but, in the world of science, it stands for that state of complete or partial torpor into which certain animals and many insects are wont to sink on the advent of cold weather. At the outset of this discussion, let me lay down the proposition that bees in cold climates instinctively sink into this condition of torpor or lethargy; also, this other proposition, that when provided with proper shelter and a sufficiency of food, they will infallibly winter well, if they can hibernate. What proof I am able to furnish in support of these two propositions, I now proceed to submit.

The hibernation of bees is no new discovery. Science proclaimed it long ago. Observing bee-keepers have noticed it time and again. Steam and electricity are not modern discoveries. As natural phenomena they were known in past ages. The discoveries have been in their practical applications. What I claim, and all that I claim in regard to the hibernation of bees is the discovery that it furnishes the key wherewith to solve the winter problem.

Now then, in proof of the proposition that the instinct of bees leads them to hibernate in a cold climate, I propose to cite only the testimony of bee-keepers. As I do not profess to be an entomologist, I will leave that branch of the subject to Prof. Cook, whose business it is to teach it in the Michigan State Agricultural College.

In Vol. IV of the American Bee Journal, as long since as June, 1869, Mr. J. H. Thomas wrote as follows: "What is the natural condition of bees during winter? I answer, it is a semi-dormant state—a sleepy, stupid condition. The reasons why such a state is the natural one, may be given as follows: First, it is a state in which the least amount of food is required; hence, the bodies are less distended under this condition, and the excrements are more easily retained. Secondly, a semi-dormant state is secured at a temperature calculated to carry off by evaporation the watery substances from their bodies, thus securing a more healthy condition of the colony. Thirdly, the temperature being always above the freezing-point, the bees are able to reach any part of the hive at any time for food. Fourthly, bees wintered in a semi-dormant state always come out in the spring healthy and vigorous. This fact alone is sufficient to prove it to be a natural condition for winter. How, then, can it be secured?" Aye, there was the rub. Mr. Thomas then believed in the cellar-plan, which he afterwards abandoned for a bee-house, while that was in turn superseded by double-walled hives and wintering on the summer stands. Neither method infallibly secured the hibernation of bees; not the principle, but the practical application of it being at fault.

In 1872, Herr Schonfeld, in the *Bienenzeitung*, said: "The first winter that would pass over our temperate zone would destroy almost all the insects had not Providence provided for their preservation. There are four methods of preservation: 1. In the egg. 2. In the larvæ, to all of which belong those insects requiring two or more years for their development. 3. In the chrysalis. 4. The developed insect. The most of those belonging to this latter class pass the winter in a state of torpidity. To this latter class belong the bees, and it is well known that these, in order that their depressed vitality may not be wholly extinguished, require for their successful wintering, besides the necessary food and rest, especially a protected dwelling." He goes on to lay it down as a maxim, that "the hive should be so constructed that the bees, during their period of torpidity and when without brood, are able to obtain and sustain a warmth of 10° R." Dr. Dzierzon, in an elaborate criticism on the article just quoted, while agreeing in the main with the positions taken, contends that no very exact regulation of temperature need be prescribed, and that, within certain limits, and not very narrow ones either, bees can and will generate the degree of heat which is best for them—a most important fact in bee-life, of which more anon.

Dr. E. Gallup, in the American Bee Journal of July, 1870, page 19, wrote: "The fact is, if the bees have the right kind of ventilation, both in the hive and in the cellar," (he was a cellar-man then) "they remain in a semi-torpid state, as it were throughout the entire winter, even as long a winter as the last one was." Mr. Gallup afterwards abandoned cellar-wintering and took to wintering on the summer stands, and gave a remarkable statement concerning a colony which subsided into semi-torpidity, consumed but little honey, and came out bright, strong, and prosperous in the spring. In recent numbers of the Bee Journal, Messrs. Pierce, Latham, Allen Pringle, Johnson, Gresh, and others have recognized the fact that bees hibernate. Mr. Latham says that the first impress of this knowledge was imparted to him when a child in his New England home, by a dame whom he asked on a cold winter evening, "Are the bears out to-night, grandma?" "No," was the reply, "the bears are among the seven sleepers." "What are the seven sleepers, grandma?" Answer: "The bears, the raccoons, the woodchucks, *the bees*, the ants, the frogs, and the snakes." "Do they sleep all winter, grandma?" Answer: "No, they wake up sometimes when we have a thaw." I do not want a better statement of the hibernation of bees than that given by the old lady whom Mr. Latham quotes. Bees do not, like bears, sleep all winter in one unbroken slumber, but "wake up sometimes when we have a thaw."

I have given sufficient proof that the disposition of these insects to hibernate has not escaped the observation of practical bee-keepers; and some of my quotations have also shown that when bees hibernate they winter well. But on this second proposition, I wish to cite two or three testimonies. The first is that of Mr. Gallup given in Vol. VII of the Bee Journal, page 258, dated May, 1872. Referring to a colony which bred late in the fall, he says: "They went into winter quarters with all young bees, and the result was (they were housed about the middle of November, and taken out on April 4), that they remained comparatively dormant all winter, and the consumption of honey was almost nothing, and on their first flight there was no discharge, not even to speck the snow one particle, and a table-spoon would have held every dead bee in both hives." I pronounce that a case of perfect wintering. What bee-keeper wants anything better than that?

Mr. L. C. Root, in his new edition of Quinby, page 255, says of a case of wintering, "I set my bees from the cellar on May 3 and 4, after they had been housed since Nov. 17, in a dry and well-ventilated room, and kept exceedingly quiet during the entire period. When put upon the summer stands, the bees were in so nearly a dormant condition that they were slowly aroused; the weather being quite warm, the usual voiding of fœces in a liquid state did not take place, and clean, new roofs were not soiled in the least." Another instance of perfect wintering.

My third witness on this point is Mr. James Heddon, author of the pollen theory, who, in his able and admirable review of my hibernation hypothesis, makes the following interesting statement:

"One fall, just before placing some 40 colonies in a double-walled, above-ground repository, I weighed a part of them with great care. For some reason, then (if not now), unknown, nearly every colony in that house readily took on that perfectly quiescent state, and the apiary wintered successfully; and when taken out in the spring and again weighed, the most successful colony *weighed but a single pound less* than when put in, in the autumn. I might have thought these figures due, or partially due to some error in weighing, had it not been that the others graduated all the way from 2½ to 5 or 6 pounds less." A third example of perfect wintering. I do not need to multiply testimony. "In the mouth of two or three witnesses shall every word be established."

A quotation from a private letter, written me by Mr. Heddon, will bring us to the very pith and heart of the question under discussion: "Of course you know, that I know, that you do not know the cause of bee-diarrhœa, unless you know that it is pollen, you know. Friend Clarke, I want you to remember that bee-diarrhœa is the cause of winter trouble. That is well known. The point to get at is the cause of bee-diarrhœa. You must know that the inmates of old box-hives have it as badly as those of any other hives; also, that several winters here have killed all the bees in the trees."

Again, at the meeting of the Northwestern Bee-Keepers' Society held in Chicago two weeks ago, Mr. Heddon said: "This question of wintering is not one of cellars, ventilation, pieces of laths, sticks, quilts and cushions over the combs—what kills our bees is diarrhœa; and the question is, What causes bee-diarrhœa?"

I take up the gauntlet thus thrown down, and to the question, "What causes bee-diarrhœa?" unhesitatingly reply: Inability to hibernate.

Let us not mistake the issue here joined. By hibernation, I mean what Mr. Heddon calls that "perfect quietude" in winter quarters, which he and other bee-keepers have noticed, and I say, if they can get into this condition and maintain it while cold weather lasts, they will not have bee-diarrhœa. If they cannot go into this state, they will infallibly contract the disease.

Now what are the essentials to the successful hibernation of bees? I have pointed them out in connection with their favorite natural home, the trunk of a hollow-tree; having been led to the discovery, as I think, of the missing link in our theories of wintering, by remembering that I never met with a case of bees being winter-killed in a hollow tree-trunk. Observe, I merely said I had never met with such a case, and I took the ground that bees usually winter well in such a place. It has been thought by some that an example of bees being winter-killed in a hollow tree-trunk was fatal to my theory. This is a mistake. In referring to the hollow-tree-trunk home of bees, I merely detailed the process of thought which led me to my present position. Suppose they are sometimes winter-killed in these receptacles, I only ask the admission that they generally do well in them, to serve the purpose of my argument. I reasoned that bees, when left to their own instincts, choose a home in a hollow tree-trunk, and so far as my observation and experience go, I find it answers their purpose excellently.

In the trunk of a hollow tree, bees find a hive without a particle of upward ventilation, its sides composed of porous, non-conducting material, and having a perpendicular shaft or column of air beneath them. Add to these a sufficiency of stores, and you have all the essential conditions of hibernation—in other words, of successful wintering.

Now, leaving the hollow tree for our artificial hives, I venture to assert without fear of successful contradiction, that if you will give bees a domicile, impervious at the top, having side-walls constructed so that frost will not strike through and condense vapor inside; supply them with an adequate stock of food; and provide a perpendicular air-column beneath them, you will be able to cry "Eureka" in regard to this winter problem. The great desideratum is, pure air, plenty of it, under the control of the bees, and in a receptacle not too large for them to regulate the temperature of it. This implies no upward ventilation, for that makes the bees helpless. To warm up a hive with holes at the top, however minute, is as hopeless a task as that of filling a tub with water that is perforated with holes at the bottom. I believe there never was a more fatal mistake of wintering bees than that of upward ventilation. We all know that warm air ascends, and it must escape through any apertures which allow the escape of moisture, which goes off in the shape of vapor. With a perpendicular shaft of pure air, the moisture will descend along with the carbonic-acid gas, and all other foul gases. But the heat will not descend. It will stay at the top. The infatuation of bee-keepers about upward ventilation is perfectly amazing. In the last edition of *The Apiary* by Neighbour, the highest English authority in apiculture, I suppose, I find the following in a plea for upward ventilation: "Holes the size of a pin-head will allow the moisture to escape, and these must be re-opened as fast as they are propolized by the bees." I would ask, "Why do the bees propolize even pin-holes?" Because instinct teaches them that they need to retain all the heat they make. The bees generate their own heat, and if it be wasted, they must consume food in excess, become distended with fœces, and cannot sink into the "perfect quietude" which is their normal condition for wintering.

There is no more perfect system of ventilation for human beings than that furnished by an open fire-place with a chimney leading from the room into the outer air. In such a chimney there are two currents of air always in motion, an ascending and a descending one, but it is well known that it wastes a large amount of heat. The open chimney is necessary for the escape of smoke. If there were no smoke, the air could and would be changed from below. This is what takes place in a bee-hive, partly from the natural descent of the heavier gases, and partly by the ventilating operations of the bees themselves, which can fan cool air into their hives during summer, and fan it out during winter. That bees possess this power has been often demonstrated.

Now let us consider how bees fare in regard to ventilation on the systems of wintering at present in vogue. On the cellar plan, they are condemned to a receptacle, the air of which is always more or less foul. Would any of us like to pass the winter in a cellar such as those into which bees are put? Can any one tell me why bees do not need just as pure air as human beings? Their sense of smell is most acute, and they cannot but be at once affected by air which has any taint of impurity in it. A cellar built in a sandy or gravelly soil, and supplied with air from a shaft in the wall, may approximate to purity, but even such a cellar is not so pure as the atmosphere without. Another objection to cellars is this: Each hive ought to have an independent self-regulating power, which is impossible when a large number of hives is stored in one common receptacle. Each colony must have the same conditions as all of the others.

Substantially the same objections lie against clamps and bee-houses, and need not be repeated. Another difficulty with all these is that a uniform temperature is and must be maintained in them. According to the theory of hibernation, or "perfect quietude," *a la* Heddon, bees need occasional variations of temperature. As the New England dame already quoted, wisely observed, "they wake up sometimes when we have a thaw." These are their opportunities for unlocking their winter clusters, stretching their legs a bit by walking around upon the combs, and taking something to eat preparatory to another period of repose. How often they need to partake of food we do not know, but they will be able to do it often enough if the outer air, with its alterations of temperature, has free access to them.

Now as to out-door wintering: Double-walled chaff hives are excellent save in two particulars: the chaff cushion on top, which gets saturated with moisture, and becomes worse than a wet blanket over their heads; and the provision for ventilation which is defective, first, it being horizontal instead of perpendicular, and secondly, in its liability to be clogged up by dead bees, ice, and snow. If these hives were lifted a couple of feet from the ground, and an air-shaft put in below them, they would meet all the conditions of hibernation, provided the cushions were thrown away, and an impervious air-tight top given them. But the horizontal air-shaft imposes extra trouble on the bees, which must drive out cold foul air by wing-fanning that would with a perpendicular outlet, sink down by its own dead weight. Bees winter well in chaff-packed hives if the entrances are kept open. "Cyula Linswik" and her sister have had very few losses for many years in wintering bees out-of-doors, but one or the other of them daily visits the hives, and sees that the entrances are unclogged. With a perpendicular air-shaft, there is no trouble of this kind. It is always open, and besides providing a constant supply of pure air, with a hopper beneath the hive connecting with the tube containing the air-shaft, the dead bees and excreta infallibly drop out of the hive.

Either want of air or an excess of it will cause bee-diarrhœa. If bees are either too warm or too cold, they will eat too much, their bodies will become distended, and they must have relief. When too warm, they are restless, cannot subside into "perfect quietude," eat more than they can get rid of in dry, powdery excretions, become diseased and die. When too cold, they eat large quantities of honey to generate heat, and the same fatal result happens. When too warm, they are apt to commence brood-rearing, and to do this consume pollen as well as honey, and this is the only vestige of truth I see in the pollen theory. But whether honey or pollen, if they eat more than they can excrete without fouling the hive, diarrhœa is the sure and fatal result.

If these views are correct, and I think they will stand the severest criticism, then our bees want, in addition to what we already give them, *air*, PURE AIR. "Only that and nothing more." To parody the well known humorous address "to the sextant of the meetin' house," our bees may well say: "You give us nice double-walled hives, let us keep lots of honey or feed us plenty of sugar syrup:"

"But o bee-keeper! there are 1 commodity wich's more than gold, wich doant cost nothin', worth more than anything except the sole of man! i mean pewer are, bee-keeper, i mean pewer are! O it is plenty out-of-doors, so plenty it doant no what on airth to dew with itself, but flies about scattering leaves and blowin' off men's hatts! In short, it's jest as "free as are" out dores. But o bee-keeper, in our hive its skurce as dimons, skurce as bank-bills when agents begs for mischuns, wich sum say is purty often (taint nothin to me, wat I give aint nothin' to nobody), but o bee-keeper, U shet ten thousand bees, workers, an brood, speshally the latter, up in a tite place, an every 1 on 'em brethes, in an out, an out an in, say 50 times a minnit, or 1 million breths an our; now how long will a hive-ful of are last at that rate I ask you—say 15 minnits—and then wats to be did? Why then they must brethe it all over agin, an then agin, an so on till all has took it down at least 10 times, an let it up agin, an wots more, the same individoal doant hev the privilege of brethin his own are, an no one else's. Each one must take whatever comes to him. O bee-keeper, doant you know our lungs is belluses; to blo the fier of life, an keep it from going out; an how can belluses blo without wind; an aint wind *are?* I put it to your conschens. Are is the same to us as milk to babies, or water to fish, or pendlums to clox, or roots an airbs unto an Injun doctor, or little pills unto an omepath, or boys to girls. Are is for us to brethe. What signifies lots of honey if i cant brethe? What matters pollen or no pollen to bees that are ded, ded for want of breth, why, bee-keeper, when we dy, its only coz we cant brethe no more, that's all. An now, o bee-keeper, let me beg of you, tu let a little are into our hive. It a'nt much trouble, only make a hole, an' the are will come of itself; an' we will warm it up to suit us."

I have said enough to make the principle plain, and I ask my fellow-apiarists to co-operate with me in working out the practical application of it. I make the modest request that you will each try at least one colony on my plan by way of experiment. The method I have devised has been already described in the BEE JOURNAL, and I will here repeat it. I have constructed a hive-stand, consisting of a box about table-high; just the height at which you can handle bees without getting the back-ache. The bottom of the box is one wide board 1½ inches thick, 20 by 26 inches; the dimensions being calculated for a Langstroth-Simplicity hive. The box is air-tight, with the exception of having four one-inch auger holes covered with wire gauze, which are bored within 6 inches of the top. The extra size of the box is meant to afford an opportunity of covering the hive with a rough shell in winter, to be packed with chaff. It also gives a wide alighting-board in front, and some shelving on the sides, and at the rear, which will be found handy during the working season. The hive to be used is without a bottom-board, but a sliding bottom-board, put in and taken out from the rear is to be used during the honey harvest. When that is over, and all danger of comb-extension is past, it is to be removed. Immediately below it is a hopper fitting tightly to the stand just beneath the hive, its flaring sides terminating in a square tube 4 inches wide each way inside, which reaches down to within a few inches of the bottom of the box. The usual entrance to the hive is to be left sufficiently open to admit of passage out and in by the bees. Through it, and the four auger holes, abundance of air will find its way into the hive. No dead bees will choke the entrance, as they will fall to the bottom of the box. A little door in the box enables the bee-keeper to see the dead bees, dry excrement, etc., that may have dropped from above, and thus the state of the colony may be seen at a glance, and without the slightest disturbance of the bees, to the extent that these signs reveal it.

A correspondent of *Gleanings* thinks that all this box-arrangement is needless. He says: "There's that man Clarke, of Canada, who had a rheumatic vision of tree-top wintering. What'll I do with him? * * To elevate his hive above the foul, damp gases, we would put it on four 3-foot locust pins, driven a foot in the ground; to secure plenty of pure, still air, we would get them within a high board-fence enclosure. For the removal of dead bees, etc., having the whole entrance open, clean off the bottom-board weekly with a bent wire." I have already stated why this rough-and-ready plan will not answer. It is not enough to leave the ordinary entrance, even if it were sure of being always unobstructed, which it is not. A few hours stoppage of it may prove fatal. Besides, I want a perpendicular column of air beneath the hive. Moreover, why be at the trouble of poking a bent wire in at the entrance, when a perpendicular air-shaft will be a self-regulating affair? My box gives me a reservoir of pure, still air, obtained two feet from the ground, and being tight, cuts off dampness and excludes foul gases. It should be added, that the bottom-board of the box is spiked to pieces of round cedar, slightly flattened on the lower side, giving the least possible contact of the box with its round sills.

Mr. Heddon objects that my plan is not practical. I cannot, for the life of me, see why it is not. It is less costly than cellars or bee-houses, and avoids all the trouble of setting bees into and out of repositories. As long ago as 1868, Mr. Langstroth said in Vol. III of the BEE JOURNAL, page 209: "For many years I have been persuaded that bee-keeping would never flourish as it should, unless some cheap and simple method could be devised, by which bees may be safely wintered on the summer stands, instead of being placed in special depositories. To say nothing of the cost of such structures, and the great labor and judgment needed for their proper use, they are open to disadvantages which cannot be remedied, even by the most skillful and prudent management. After the bees have been placed on the stands, if the weather suddenly changes, a cold wind springing up and clouds obscuring the sun, it is often found that as many bees are lost as if the colonies had wintered in the open air. Colonies which have wintered well on the summer stands, are usually more forward in breeding than those of equal strength which have been put in special depositories. When first put out, the latter have a deceptive appearance of strength; for the old and feeble bees which would have died if they had been wintered in the open air, perish soon after they begin to fly." These are wise and true words. But I believe that if bees are wintered so that they can hibernate, fewer bees will die. They will attain greater longevity if they get a natural and prolonged winter rest. Moreover, I have little doubt that the method I have been advocating will prove an effectual antidote to spring dwindling—next to bee-diarrhœa, our chief trouble in keeping bees. But on this and various other points, I cannot now enlarge. In closing, let me insist upon it that the mortality of our bees in winter is the result of some violation on our part of natural law. We have on this Continent the best honey field in the world. It was, therefore, plainly designed by Providence that bees should flourish here. There must then be some feasible plan of wintering these insects, and we ought to find it out. We *must* wrench this secret from nature's store-house of mysteries. As already said, I believe I have the clue which has only to be followed to secure the result which we all so earnestly desire. If, however, I am mistaken, let us "try, try again." I have stated my views, modestly, I hope, yet with all the confidence of firm conviction. I only beg that they be fairly tested, and not pooh-poohed as childish and chimerical. This is the only method of wintering bees that is based on a scientific principle. If the principle is correct, the details will not long be wanting. My one fear about it is, that it will so simplify bee-keeping that it will become distressingly common, and that those who follow it as an exclusive business, may have cause to mourn over "Othello's occupation gone."

Speedside, Ont.

For the American Bee Journal.

Those Continuous Passage-Ways.

DR. G. L. TINKER.

At the Northwestern Bee-Keepers' Convention, as reported on page 679, Mr. Heddon took exceptions to the principle of "continuous passage-ways" in hives used for the production of comb honey.

I believe that Mr. Heddon was honest in his views, but like many who have hastily condemned inventions, he condemns without cause. This is apparent from the statement made, that it is "a great saving of jack-knives" not to allow the top and bottom pieces of sections to touch each other; and again, "not only are bees killed when the case of sections is put in place, but propolis is put along the edges of the sections where they come in contact." In answer to these objections, I will say that there is no sticking of the sections on hives the supers of which are properly arranged for "continuous passage-ways," thus requiring no lever to pry them up; the sections are removed and replaced without annoyance from propolis. and that, too, very quickly at any time. Propolis will be placed along the inside edges of the side pieces of the sections in the same manner as upon any hive, but there is so little attached to the edges of the top and bottom pieces of well made sections that it is not noticeable, and hence not necessary to clean it off at all.

With the Heddon "case of sections" there is ordinarily twice the amount of propolis stuck upon the ends of the bottom pieces of the sections where they rest upon the tins, and upon the corners of the sections on top, as is placed upon sections on a hive provided with "continuous passage-ways." Moreover, it requires to be cleaned off in order to make the sections of honey presentable. The worst of all is, if the sections are not removed as soon as filled, the tops and bottoms will become so soiled with propolis as to mar the appearance of a nice section of honey. On a hive provided with "continuous passage-ways," the sections will not be soiled, if left on from one year's end to another.

The section-cases can be tiered up easier and quicker, and rarely is a bee killed. In adjusting, tiering up, and removing the section-cases of 30 hives having "continuous passage-ways," during the past season, only one bee was killed. There were never any bits of wax to clear away, and all opperations were easily and readily performed. Still another advantage was the facility with which the bees entered the sections and began comb-building.

Bees will loiter in the bee-spaces above the brood-frames of other hives for days after the colonies in hives arranged for "continuous passage-ways" are at work in the sections. Such bee-spaces, representing about 180 cubic inches beneath the first case of sections on the Heddon hive, is so much useless space, which must always be occupied by bees to no purpose. Again, in lifting off the top-board and cases of his hive, especially if they have been left on very long, they come up with a jar which startles every bee in the hive. On a hive provided with "continuous passage-ways," the cases may be lifted off and replaced so noiselessly as to scarcely disturb an ugly colony.

One year ago last winter, Mr. Heddon made statements similar to those above, and said that the advice to bee-keepers to use "continuous passage-ways" in the production of comb honey was "the worst kind of advice." He had made an experiment long ago, and because it did not prove satisfactory, he assumes that no other device can. He evidently realized that there was an advantage to be gained, but turned away from the project upon a single failure! He looked upon it then as does Mr. Doolittle, who not long since stated in the BEE JOURNAL that he had sought a practicable arrangement of this nature for the past 12 years. There is every reason to believe that "continuous passage-ways" tend to the building of straight combs, to say nothing of the probability of a larger surplus being obtained where they are provided. The only trouble which I have encountered is with the German bees. Whatever Mr. Heddon's German bees may do, those of this locality naturally and irremedially build crooked combs, and it would be folly to try to get them to build straight combs without the use of separators. The German hybrids do a little better, but the naturally straight and most regular comb-builders are the Syrian bees whose single fault appears to be in the capping of their combs.

New Philadelphia, Ohio.

Farm and Workshop.

Women as Bee-Keepers.

MRS. L. HARRISON.⊙

Some women love to be dependent and to be compared to clinging vines which are lifted into the sunshine by sturdy oaks; there are others again who scorn dependency and can stand erect being guided by the light from heaven and true womanhood. The latter class of women love to be producers, and in olden time found abundant range in manufacturing cloth. Solomon said: "She seeketh wool and flax, and worketh willingly with her hands; she layeth her hands to the spindle and her hands hold the distaff." The use of steam has almost entirely dispensed with the old spinning-wheels and looms from the household, and so self-reliant woman is prying into every nook to discover some other avenue wherein she can develop her mind and energy.

Scientific bee-culture is an open field to all women of energy and brains; here is a free range for discovery, improvement and production. Why, we do not even have to pay one cent to be admitted to membership of bee-conventions, being regarded as superior beings or as ornaments of sufficient value to balance all admission fees, badges, etc.! If we compete with the opposite sex, in making pantaloons or in teaching school, we will be obliged to accept less remuneration than they command: but who ever heard of a pound of honey selling for less because it was produced by a woman? No "vines" had better embark in the business, or even women of means who know nothing practically of bee-keeping, but who purpose to hire their bees cared for by others, and expect to reap a rich reward from their investment; but any woman who can make good bread, pick a goose, milk a cow, or harness a horse, can make bee-keeping a success.

I know a woman who is going out to wash by the day in order to earn enough money to purchase a colony of bees. I opine that she will make bee-keeping a success as she is bright, smart and self-reliant. She has the misfortune to have a paralytic husband, and thus exerts herself to make a comfortable living and to educate a feeble son. All honor to her and other brave women who never shirk the burdens of life.

There is nothing connected with bee-keeping but what a woman can do as well as a man. She should not be expected to manufacture her bee-hives any more than a house-keeper to build her own house; but as hives, frames and surplus boxes, can be purchased so cheaply in the "flat," I know no reason why she cannot learn to nail them together. I should have tried my hand at it long ago, if I had not a partner who is an expert at it.

No one should engage in the business expecting to find a "bonanza;" but any woman may reasonably expect fair returns for the time and money expended. One or two colonies is sufficient to commence with; and if her knowledge increases in like ratio with her bees, all will be smooth sailing and a prosperous voyage.

Peoria, Ills.

For the American Bee Journal.

That Wonderful Yield of Honey.

S. M. W. EASLEY.♀

On page 700 is an article from a letter, which was not intended for publication, in which I place the honey yield of Ventura county at 9,000 tons. I should have said 900 tons from 9,000 colonies, spring count. I made the estimate on a basis of 200 pounds per colony; mine produced 314 pounds. Some small apiaries have secured more, and some larger ones, less. I think that 200 pounds per colony is a fair average, which would amount to 900 tons. Mr. Warring bought this apiary of 444 colonies in March 1883, for which he paid $1.15 per colony, and also paying cost of material in bee-houses, tanks, extractors, lease and implements. He leased me the apiary to run on shares, for ½ of the honey and increase. Last season was a poor one, and I extracted about 14 tons. I had, on March 1, 1884, 550 colonies in two apiaries one mile and a half apart. About one-half of the hives had on supers. I increased the number of colonies to 1,250, all of them with supers. I extracted from the 550 colonies 172,700 pounds of honey, besides what has been used in the family. I had 57 swarms on May 1, which was my twenty-fifth wedding anniversary, and my wife wanted to have a celebration, but I told her that if the weather was good, we would be too busy. I had 44 swarms at the home apiary hived by myself and daughter, and 13 at the other apiary hived by two of the boys. That was the busiest day I had during the entire season, though we were busy all the time. My daughter and boy (the boy only 15 years old) uncapped and extracted, during the first week in July, 15,000 pounds of honey, and on July 4, they extracted 3,000 pounds. I use an eight-frame extractor; the frames are turned without being lifted out. In a future number of the BEE JOURNAL I will, if I can find the time, give a description of the hive which I use, my management of the apiary, swarming, etc. It differs some from that generally given.

Springville, Calif.

For the American Bee Journal.

Origin of Honey-Dew.

J. M. HICKS.

No subject brought before bee-keepers has ever elicited more different opinions and reports than the subject of honey-dew; but this matter, like many others, has been so thoroughly ventilated, that it is not difficult for one who has heard and read every side to decide which is right. We see that some contend that honey-dew falls from the atmosphere on leaves of trees and plants, just as common dew. This idea, however, had to be abandoned, from the fact that sometimes honey-dew is found only on one kind of tree, such as hickory, oak and linden. Occasionally it is found only on the buds of one species of trees. I have, on more than one occasion, seen it in certain localities confined to the dry leaves of the beech only, and at other times I have noticed it only on the hickory, or some other special class of timber, such as papaw.

It is plain then, that the so-called honey-dew was no dew at all, for if it had come from the atmosphere it would have been found on all kinds of trees at the same time. It has also been stated by many that honey-dew is a secretion from aphidæ or other insects; but none of the experiments related, prove conclusively that such was the case. It is true that in several instances, aphidæ, or plant-lice, were found under the leaves which secreted honey-dew, but in most cases no insects were found. I have, at various times, investigated this subject which seems to puzzle so many, and having found some honey-dew on the leaves of oaks, as well as hickory, I hunted for aphidæ, and found some on the under-side of several leaves; but after further research, I found leaves which had aphidæ and no dew.

Another fact worthy of notice is, that the dew is always found on the upper-side of the leaf, and the aphidæ on the under-side. The most rational theory, to my mind, in this matter is that which asserts that the honey-dew is an exudation from the leaves of the trees, caused by a certain state of temperature. This would account for the honey-dew appearing only on one kind of tree at times. A strong evidence in favor of this theory is to be found in the fact that honey-dew only takes place during changes of temperature, before or after storms. It appears that honey-dew can be found on many kinds of trees (as all who lay any claim to knowing anything about it, will not deny) and plants, at times, but most generally on hickory, oak, linden, beech and willow, and often on the tulip or poplar trees.

The honey harvested from honey-dew is generally of poor quality and of dark color. I well remember the honey-dew of 1871 in Madison county, Ind., how abundant it was, and the bees seemed to eagerly work while the harvest lasted, which was truly bountiful, and yet it was of a dark as well as a poor class of honey. It is also true that during the winter following, many of the bees were very much affected with disease, and the mortality was great; many thousands having perished, causing much loss to bee-keepers, and at the same time most or nearly all the depopulated hives were filled with honey, showing conclusively that honey-dew is not of the best class, nor to be relied upon for wintering purposes.

Battle Ground, Ind.

Indiana Farmer.

The Best Frame for all Purposes.

T. J. COOK.

As there is a demand for opinions in regard to which frame is the best, I will give my reasons for adopting the standard Langstroth frame. When in the spring of 1881 I found myself beeless, I made the subject of frames a special study for more than six months. I considered the experiments of Mr. Langstroth and others, and from their experiments they decided that for practical success a frame should be longer than deep, also for convenience both for the bees and for the manipulator.

In regard to wintering, the Langstroth frame has stood the test; for while bees died on the Langstroth frames, they were also dying on all other frames and box-hives too, and if there are any odds, they are in favor of the Langstroth frame. The Langstroth being a standard frame, the fixtures pertaining to it are also standard, thus avoiding a complicated lot of hives and apiary fixtures, which are an abomination to successful bee-culture.

The satisfaction of having interchangeable goods is quite an item. It embraces about all the good qualities required of a frame, from comb honey to queen-rearing, and avoids many bad qualities found in many other frames. Hives can be piled up four stories high in the same space where frames 12 inches deep are only three stories high. Side storing can be accomplished nearly or quite as well with them as with deeper frames, but as bees have a natural instinct to store the surplus above the brood-chamber, it is only in exceptional cases where side storing is a success.

In point of manipulation the shallow frame is best. The Langstroth frame is very easy to handle. I do not remember ever hearing of its being discarded where a practical trial had been given it.

Now there is a belief among a certain class that if bees have the right kind of a hive, they will thrive better and store more honey, but that is superstition. It is as the editor of the *Farmer* says: "The particular style of hive is but part of the subject to be understood. Much more depends on the individual than on the exact shape of the frame to be used." I will add that the movable-comb idea is for the convenience of the bee-keeper in handling the combs, and for those who will never handle the combs, a box-hive is as good as the best hive made.

Having used the Langstroth frame, I will say that I am satisfied, and will not change for any other style. I trusted to the experience of prominent veterans, and find I have made no mistake in doing so.

Decatur, Ind.

For the American Bee Journal.

Introducing Queens.

J. E. POND, JR.

I fully believe that a colony of bees will accept a queen at once if offered them at the entrance of the hive within 24 hours after the old one is removed. I believe also that if such queen is not so offered them within 24 hours, that some days must elapse before it will be accepted. My experiments during the last season have been on a scale sufficiently large to warrant me in that belief, and I think that the theory which I offer in regard to the matter is correct.

In the first instance, it follows from the fact that queens often leave the hive and return again. Now, if a new queen is offered in a natural way (viz: at the entrance of the hive), before the old one is missed, and before queen-cells have been begun, they will accept her, not knowing the difference, and, perhaps, not having realized their loss. If, on the other hand, more than 24 hours elapse, they have missed the old queen and have started queen-cells, and know full well that time enough has not elapsed for a young queen to be produced from them. I do not believe in the notion that each separate colony has a peculiar scent by which its individual members are known to each other. This notion is too much on a par with the old frying-pan and key business in swarming.

I do not suppose that this theory of mine will be accepted by the majority of bee-keepers, as they will claim that I give the bees too much reasoning power. But where, I ask, can we draw the line between instinct and reason?

At any rate whether accepted or not, I trust that it will be the means of starting further inquiry into the matter of introducing queens, and of giving us out of that inquiry a surer plan than any which we now have knowledge of. That we need some method of speedy introduction all will admit; and I trust some such one will soon be discovered.

Foxboro, Mass.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

☞ To all new subscribers who send us $2 for the Weekly BEE JOURNAL next year, we will send the rest of the numbers of this year *free* from the time the subscription is received at this office.

SELECTIONS FROM OUR LETTER BOX

About One-Third of a Crop.

This year my crop of honey was short. I obtained 22,000 pounds, being about one-third of a crop. I have 700 colonies with which to begin the winter. L. LINDSLY.⊙
Waterloo, La., Nov. 12, 1884.

Use of Foundation, etc.

I commenced the season with 42 colonies, and increased them to 75 colonies by natural swarming. I obtained about one-third of a crop (1,800 pounds) of comb honey, and I sold it at 18 cents per pound. The prospect in the early part of the season was encouraging, but during basswood bloom the weather was so cold and dry that the bees did not store much surplus. They gathered most of their stores from goldenrod. I notice that some writers for the BEE JOURNAL think that it does not pay to use foundation. I think that it is just the thing for this Northern climate. The honey seasons are so short that it is certainly profitable to use foundation very freely. I have had new colonies draw out the foundation and deposit eggs in it in 30 hours after being hived. During the season I introduced 3 queens on the plan suggested by S. Simmins, and it proved a success.
C. S. HAWKINS.⊙
Sauk Rapids, Minn., Nov. 12, 1884.

Good Yield of Beeswax.

I have to report about 17 tons of extracted honey from 246 colonies, spring count, and an increase of 44 natural swarms. This average of 138 pounds per colony is certainly small in comparison with that of Mr. H. C. Parks, of Riverside, Calif., which is only 20 miles from this place; but I challenge any bee-keeper in the production of beeswax, which amounted to 450 pounds, or nearly 2 pounds to the colony. This season has settled the much-agitated question of ripening the honey by means of ventilation, and exposition to the solar heat in large tanks and glassed troughs. The vastness of the crop made this method impracticable and unnecessary, as most bee-keepers had not help enough (specially skilled) to take out the honey before it was capped in the cells. In my opinion nature does this curing or ripening process not only better, but also more economically, if we consider the result. The low prices for honey in good years, make the business of bee-keeping less profitable than other pursuits well performed. Bee-keepers are here scattered all over the country, but far apart, and should unite, therefore, for two purposes. First, to lower the price of production, by ordering the cans and cases at a certain price from one reliable firm; and, second, by stating the prices of the different grades of honey, under which they agree not to sell. H. SONTAG.○→
Cucamonga, Calif., Nov. 4, 1884.

Report from Fairview Apiary.

The present season has proven a very poor one in this locality. No basswood honey has been secured, and but little clover honey. My honey harvest was confined to 16 days on buckwheat, from Aug. 4 to Aug. 20, with the following result: Those colonies run for extracted honey averaged 100 pounds per colony, or 6¼ pounds per day; those run for comb honey, 28⅓ pounds per colony. All was gathered by black bees. With extracted honey at 10 cents per pound, and comb honey at 15 cents, retail, one will readily see which is the more profitable. Box-hive men have had varying degrees of success, some reporting no increase and no honey; some a large increase but no honey, and some, a little honey. One small apiary of 14 colonies in box-hives produced a surplus of 25 pounds of comb honey; these I have come in possession of, and will see what they will do in frame hives. Not 75 rods from them was another lot of bees in the same kind of hives, and every condition apparently as favorable, but they produced no honey.
WILBER G. FISH.♀
Ithaca, N. Y., Nov. 14, 1884.

Bee-Keeping in Alabama.

Old fogy bee-keepers, with their log or box-hives, as usual, know all about bees. They say that this year's yield was about an average honey crop, being 20 to 25 pounds per colony. The following is the report of Geo. H. Hoyle, of Mobile, Ala.: He commenced the season with 11 weak colonies, and later obtained a 4-frame nucleus, making 12, which increased to 37 strong colonies, from which he secured 1,941 pounds of honey, 136 pounds of comb honey in one-pound sections, and 1,805 pounds of extracted. He sold it at home at 20 cents and 12½ cents per pound. Many people came to get 50 or 100-pound kegs after the honey was all sold. The 4-frame nucleus was transferred to a 10-frame Langstroth-Simplicity hive, and were given six sheets of foundation. The fine Italian queen being very prolific, the colony soon covered 40 combs, 36 of which were on foundation. It was increased to 2 strong colonies, and gathered 137 pounds of extracted honey, which was sold at 12½ cents per pound, making a profit of about 237 per cent. in honey alone.
A. M. HOYLE.
Morgan, Texas, Nov. 17, 1884.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

We have had some bound in Russia leather, with colored edges—price 60 cents.

Convention Notices.

☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.
W. B. LAWRENCE, *Sec.*

☞ Excursion rates from all points on the Chicago & West Michigan R. R. have been secured for the benefit of those desiring to attend the Western Michigan Bee-Keepers' Association, held at Music Hall, in Fremont, Mich., on Nov. 25, 1884. Certificates can be had by applying to Mr. T. M. Cobb, President, Grand Rapids, Mich., or to Mr. Geo. E. Hilton, Secretary, Fremont, Mich. Prominent bee men from abroad are expected, and an interesting time is anticipated.
GEO. E. HILTON, *Sec.*

☞ The Willamette Valley Bee-Keepers' Association will hold its second meeting at La Fayette, Oregon, on the third Tuesday in June, 1885. All who are interested are invited to attend.
E. J. HADLEY, *Sec.*
F. S. HARDING, *Pres.*

☞ The annual meeting of the Michigan State Bee-Keepers' Association will occur in Lansing, Mich., in the Senate Chamber of the State Capitol, Dec. 10 and 11, 1884, first session beginning at 10 a. m. on Dec. 10. This being the home of Prof. A. J. Cook, and the location of the State Agricultural College, it is expected that this will be the most interesting meeting ever held by this Society. A programme is being prepared, including several very important and interesting papers from Prof. Cook, T. J. Burrill, Dr. Beal, and R. L. Hewett, and several prominent apiarists from other States. A large delegation is expected from Canada. The question-box will be one of the important features. Come prepared to ask and answer questions. Reduced rates on all Michigan railroads, and at hotels in Lansing. The President and Secretary will be at the Hudson House. Notify me as soon as possible how many railroad certificates you will want, and over what road you will go, so I will have time to procure them. A cordial invitation is extended to all. Please come and bring your bee-keeping friends with you.
H. D. CUTTING, *Sec.*

☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in Adrian, Lenawee Co., Mich., on Dec. 3, 1884, in Plymouth Church Chapel. All bee-keepers are cordially invited to attend, and bring with them anything for exhibition that will be of any use or benefit to bee-keepers. Let all turn out and have a good time.
A. M. GANDER, *Sec.*
F. W. GILBERT, *Pres.*

Local Convention Directory.

Time and place of Meeting.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

1885.
Jan. 6.—Southern Wisconsin, at Janesville, Wis.
J. T, Pomeroy, Sec.

Jan. 14,—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

June 19.—Willamette Valley, at La Fayette, Oreg.
E. J, Hadley, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Oil-Cloth Covering.

Please inform me through the Bee Journal whether a covering of oil-cloth (or any material impervious to water) over the frames in winter is likely to cause the combs to become moldy. I have been troubled with that some and propose to cover only with sacking as I put my colonies into the cellar. W. W.

St. Paul, Minn.

Answer.—Of course, a porous cloth will pass the moisture away from the combs and cluster of bees, while one impervious to moisture would not. In my own experience, I could never discover any harm resulting from a porous covering, and for that reason I use such a one over all colonies which are wintered out-of-doors.

Moving Bees, etc.

1. I have bought some bees in box-hives, and I wish to move them home 2½ miles and put them into the cellar. Which is the best time, a warm or cool day? Now or later? Would it be best to put them right into the cellar from the wagon or leave them in my bee-yard till they can have a flight?

2. On Nov. 11 my bees had a flight, not having flown before for some time; they voided an excrement which spotted white clothes and resembled that voided at the first spring flight. Is it an indication of disease? or is such voiding a cleansing process preparatory for winter?

3. For extracted honey I use pails, the covers of which slip over or outside of them; and I find that in moving the honey, it will leak out from under the cover. How can I remedy it?

4. Is it necessary to wax a well made oak-barrel holding 160 pounds? Can paraffine be used to advantage for waxing? W. G. Fish.

Answers.—1. On a day when the temperature is warm enough so they can have a thoroughly cleansing flight when you get home with them. Place them a considerable distance apart, in irregular positions, and smoke the bees well back from the entrances before you open them to release them. Do this and give them their flight before you open the hives at the top. I should much prefer that they have this flight before placing them in the cellar.

2. It is both; though it is no *sure* sign that such accumulation will go on increasing until your bees die with the diarrhœa.

3. I prefer a pail which has a cover whose flange or rim goes inside of the pail. Any of these pails are not intended to *ship* honey in while it is in the liquid state. When you can turn a pail down on its side, or turn it "up side down," and leave it so for 48 hours, and no leakage occurs, then you have a pail fit to ship liquid honey in.

4. No, I find no need for waxing well made barrels, and it pays to use no other. Waxing costs about the same as the cooperage. I know nothing of the nature of paraffine.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts.; per doz., **40** cts.; per hundred, **$2.50. 500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Nov. 24, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY.—There is an unsatisfactory demand for extracted honey from manufacturers, while there is a fair inquiry for small packages of clover honey such as dime, ½-lb., 1-lb., and 2-lb. jars, from the retail trade. Prices are low as arrivals exceed the demand. Extracted honey brings 5@9c. on arrival; choice white comb honey is in fair demand and sells best in 1-lb. sections. It brings 15@16c. in the jobbing way. We have several small lots of dark comb honey from parties in Illinois, and offered it as low as 10 and 11 cents per lb, without finding a buyer. Dealers most certainly mislead producers by quoting buckwheat and poplar comb honey, if they are not more successful than we are in disposing of the same.

BEESWAX.—The demand is slow and arrivals are few. Good yellow brings 26@27c. on arrival.

C. F. Muth, Freeman & Central Ave.

NEW YORK.

HONEY.—The market is well stocked with honey which is in good demand at the following prices: Fancy white comb in 1-lb. sections, 18@20c.; the same in 2-lb sections, 16@18c.; fair to good white comb in 1 and 2-lb. sections, 14@16c.; fancy buckwheat comb in 1-lb. sections, 12@13c.; same in 2-lb. sections, 11@11½c.; ordinary buckwheat comb in 2-lb. sections, 9@10c. Extracted, white clover in kegs or small barrels, 6½@8c.

BEESWAX.—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. Burnett, 161 South Water St.

SAN FRANCISCO.

HONEY.—There is a good demand for best qualities of comb and extracted, but ordinary sells slowly at low figures. White extracted in cases changed hands at 4¼c., and granulated honey of good quality sold for 3¼c. For extra choice extracted, 5½c. is readily obtained in a jobbing way. White to extra white comb, 9@10c.; dark to good, 6@8c.; extracted, choice to extra white, 4¼@5c.; dark and candied, 3¼@3½c.

BEESWAX.—Wholesale, 24@27c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY.—The market is quiet and unchanged, with good demand and liberal receipts. Comb, ½-lb. sections, none in the market. They would bring 18c.; 1-lbs., 14@16c.; 2lbs., 13@14c. The above figures are for choice stock in regular shipping crates. Dark or large combs in rough crates sell slowly at 9 to 10c. Extracted, California, 6@7c.; white clover, 7@8c.; Southern, 5½@6c.

BEESWAX.—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

New Subscribers for the Monthly for 1885 will have all the numbers for 1884 *free* that are published after the subscriptions are received at this office.

Make $20.00 for Christmas.

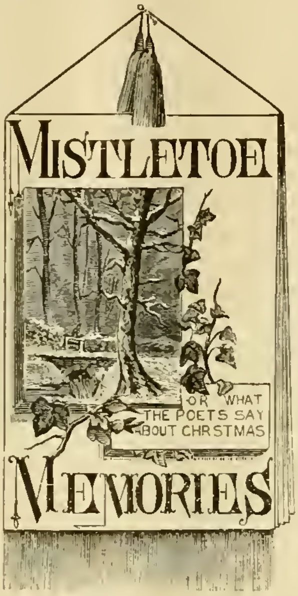
The publishers of *Rutledge's Monthly* offer twelve valuable rewards in their *Monthly* for December, among which is the following:

We will give $20.00 to the person telling us which is the middle verse of the New Testament Scriptures (not the Revised Edition) by December 10, 1884. Should two or more correct answers be received, the REWARD will be divided. The money will be forwarded to the winner December 12, 1884. Persons trying for the reward must send 20 cents in silver (no postage stamps taken) with their answer, for which they will receive the January *Monthly*, in which the name and address of the winner of the reward and the correct answer will be published, and in which several more valuable rewards will be offered. Address RUTLEDGE PUBLISHING COMPANY, Easton, Pa.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

A Christmas Present.

To every person who sends us one NEW subscription, (besides his own renewal), for one year, for the Weekly BEE JOURNAL, or 4 NEW Monthly subscribers, for a year, we will send as a present, by mail, postpaid, a copy of "Mistletoe Memories, or What the Poets say about Christmas."


MISTLETOE
OR WHAT THE POETS SAY ABOUT CHRISTMAS
MEMORIES

It comprises a collection of poems selected from the writings of H. W. Longfellow, J. G. Whittier, Thomas Hood, Alfred Domett, Chas. Mackay, Sir Walter Scott, Jennie Joy, and others. The whole bound in Banner shape, with rich silk fringe and tassels. For presentation, this art souvenir is vastly superior to a mere Christmas card, as it combines the advantages of both art and literature. Size, 4 by 6½ inches.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

CLUBBING LIST.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00..	
and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)	2 75..	2 50
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping.	3 50..	3 25
Langstroth's Standard Work	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing	3 00..	2 75
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 30..	4 25
Blessed Bees	2 75..	2 50
King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 75
The 6 above-named papers	6 50..	6 00

Bee-Keepers' Badges at Fairs.

We have some **ELEGANT RIBBON BADGES,** having a rosette and gold Bee, for bee-keepers' use at Fairs, Conventions, etc. Price 50 cents each, by mail, postpaid.

Address, **THOMAS G. NEWMAN,**
925 West Madison St., CHICAGO, ILL.

BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR.

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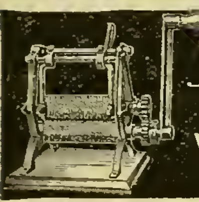

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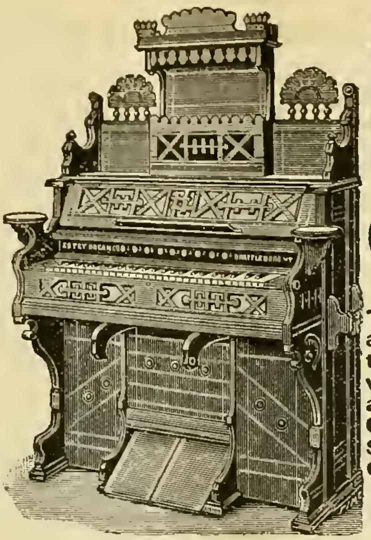

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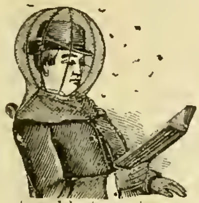

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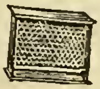

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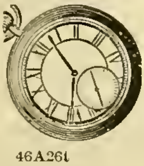

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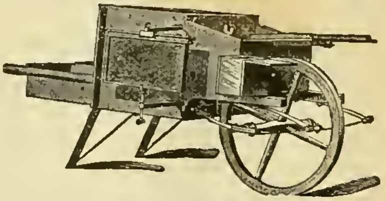

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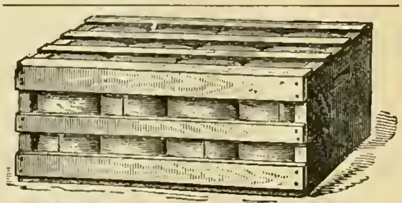

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THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., December 3, 1884.

VOL. XX.—No. 49.

THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR,
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year; Monthly, **50** cents.

Entered at the P.O. as Second-Class matter.

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All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

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and numbers of other dealers.

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We guarantee every inch of our Foundation equal to sample in every respect.

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5AB1y HAMILTON, Hancock Co., ILL.

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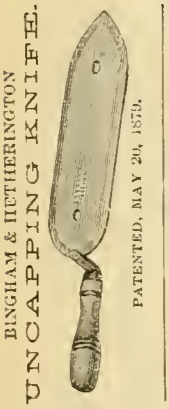

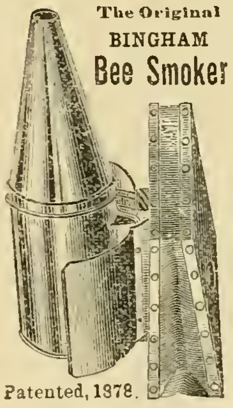

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Plain smoker	2 "	1 00
Little Wonder smoker	1¾ "	65
Bingham & Hetherington Honey Knife, 2 inch		1 15

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The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

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Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

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Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., DECEMBER 3, 1884. No. 49.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOF AND PROPRIETOR.

Build up your Home Markets.

This, we verily believe, is the best advice that can be given to apiarists generally. There should be a steady and *growing* demand for honey in every locality in America, no matter whether it be a large or small place.

The large markets are well supplied with honey, while in the smaller ones it is often a very scarce article. This should not be the case when the honey is produced in the country. Just think of it! The country merchants in all the Western States are continually ordering honey, both comb and extracted, from the wholesale grocers of Chicago, and thus it has to be shipped *twice* when none would be necessary, if every home market were kept well supplied by the producers near it.

Let every honey-producer see to it that all the towns in his immediate vicinity are well supplied with good honey, put up in attractive packages, and this will in a great measure remedy the evil, and keep prices up to a paying basis. The Indiana *Farmer* of last week has the following which is just to the point:

> We are strongly impressed with the idea that this is one of the most important subjects now before the bee-keepers of this country, and we feel very much like keeping the sentence standing at the head of our Apiary Column, a persistent reminder that in our home markets rests our best success. Our California advices report that large lots of fine honey are being sold there as low as three cents per pound. This is much lower than it can be produced with anything like profit, and shows that something is woefully wrong. There is some remedy for all this, and we are fully impressed with the idea that the very first step towards remedying the evil is to see that our home markets are fully supplied. There are thousands of people in this grand country of ours who have never eaten such honey as we are able to offer them at the present time, that would become regular consumers, if once induced to make a purchase. This matter is not theoretical with us. Besides we know personally of parties who dispose of good crops of honey at a fair price, among their neighbors, while others do not try to dispose of a pound at home, but seek a large market at a loss to themselves.

The example has been often recorded, how an enterprising bee-keeper has built up a local trade which is not only lucrative, but a steady thing, year after year; and when we think of the saving of freight rates and breakages, does it not pay well to look after the home markets? Just think of it! Five hundred or a thousand Leaflets with the producers name and address on them would sell tons of honey every year in almost any neighborhood. Try it, and astonish yourselves with the result! The only *necessity* is to have good honey in attractive packages, and energy enough to push the sale and *make* the market.

☞ We have received a copy of an excellent agricultural work entitled "HOW THE FARM PAYS," published by Peter Henderson & Co., 35 and 37 Cortland Street, New York. It is a volume of over 400 pages, being well bound, extensively illustrated, and nicely printed on good paper, aud deserves a position in every well regulated farm-house in the land. All should study it who are endeavoring to make farming a success, as it treats thorougly and practically of the various important subjects which should engage the earnest attention of every progressive farmer.

☞ The Michigan State Bee-Keepers' Association will meet in the Senate Chamber of the State Capitol on December 10 and 11, 1884.

Ignorance About Honey.

The ignorance of the public concerning honey is astonishing, when we consider the efforts being put forth to instruct them concerning it. In the *Prairie Farmer*, Mrs. L. Harrison gives the following illustrations of this ignorance:

> A lady called this morning saying that she wanted to buy some comb honey to make a wash for the baby's mouth. The Doctor had told her that she must not buy it at a drug store, but get it in the comb and strain it. This looks as if the Doctor thought the drug-srore honey was adulterated. I showed her some extracted honey, telling her it was pure, but she shook her head saying "the Doctor told me to get comb honey and 'strain' it myself."
>
> Yesterday, an Irish woman who has a few colonies of bees called, and said that she could not sell her honey, because the stores were so full of that white stuff in little frames, that is made in Chicago. "Shure, indade, the comb is made and filled with glucose, and then sealed with a hot iron." It appears that the "scientific pleasantry" of Prof. W. is widely disseminated. All bee-keepers, and those who have ever worked with wax, know that to thus fill and seal is an impossibility, and yet when this statement was made by a learned professor, it had the run of all the papers.

☞ The *Sugar Bowl and Farm Journal* contains a very complimentary notice of the apiary and business of Dr. Paul L. Viallon at Bayou Goula, La. It says:

> Just as you enter Bayou Goula, you observe a home-like cottage, embowered among trees, a croquet ground at the side, and back of this, some large new buildings to themselves. As you enter the apiary grounds you find perfect order and an easy method for the management of those little "stingers" and useful "busy-bodies." Four hundred colonies of bees and 200 nuclei for queens comprise the industrious settlement.

☞ For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail postpaid.

To Indiana Bee-Keepers.

Mr. A. Cox gives the following concerning the Bee and Honey Show at Indianapolis, in the *Indiana Farmer* :

I cannot hold my peace any longer. I am so rejoiced over the success of the bee-keepers' display in the apiary department at our last State Fair that I must say something about it. It was certainly splendid, and I can only attribute the success to the great zeal we bee-keepers have for our industry and to the fact the bee-keepers of Indiana do not let their colonies become queenless. And now that our good time at the Fair is over, I am looking forward to a good time coming, when our next State Bee-Keepers' Association meets this winter. We want every bee-keeper to remember it, for we expect a larger attendance than ever before. The lady bee-keepers must come. Our President is a lady, and a very pleasant one too, and she wishes all lady bee-keepers to attend. There is very important business to attend to and it must be looked after. The advance that apiculture has made in this State places Indiana among the foremost as a bee-keeping State. There should be some very important steps taken this winter for its further advancement and it will be to the interest of every bee-keeper in the State, if he can be present, to come. Besides this, I presume our meeting this winter will be largely attended by visitors from other States. There will be ample room and I would say to all to come, for there is work for everyone.

Boone Co.

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Wax and Candied Honey.

Mrs. L. Harrison gives the following in the *Prarie Farmer* of last week on the above subject :

Owing to the sickness of myself and family last winter, considerable of honey remained unsold. I find some of the lot candied, and as many persons do not like "sugared" honey, I melt it and sell it as liquid honey. As the quantity which I liquefy at one time is not large, I reduce it in a pan set over a kettle of boiling water, stirring it often so that it will all melt without getting very hot, which would injure both color and flavor. As soon as the wax forms in a cake on top, I pour the honey from under it, through a coffee-strainer into a vessel, while warm, as it can be done so much more readily. This honey is sold in Mason fruit jars, and marketed before it solidifies again. There is great difference in honey, with respect to its granulating; lately I melted some that was very white, and it became solid in a day or two; another quantity remained liquid for weeks.

During the fine weather of this month, I set out this wax from the top of the melted honey, and let the bees clean it off, and also the boxes from which it was taken. The boxes were then put away for another season, free from stickiness. I was amused lately at the ability of the bees to clean an article soiled with honey. I had the misfortune to spill some extracted honey in the buggy, into which I dropped my veil. When I reached home, I spread the veil out on the gooseberry bushes, thinking it would never be used again. The next day was fine, and toward evening, noticing the veil, I found the honey all gone. The dew of the preceding night had moistened it, and the bees had removed all of it.

The honey from the top, when melted, is very light in color and sells readily. I pour it, while hot, through a coffee-strainer into oiled tin-pans. If there is a sediment, I pour it again into a fresh pan, settle it, and return it again to the melting pan. To have wax settle nicely, it should be kept melted, without heating too hot. The coffee-strainer containing sediment, can be left to drain in a moderate oven; and when the sediment will drain no more wax, it makes a good fire. In order to have cakes of wax free from cracks, cool very slowly. Some wrap flannel around the vessel to keep in the heat a long time.

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The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

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☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.

W. B. LAWRENCE, *Sec.*

☞ The East Saginaw, Mich., *Courier* says that Mr. John Rey's apiary, consisting of 56 colonies, is at the rear of his residence in that city, and that he has obtained from the bees, 3,392 pounds of comb honey, and has extracted 600 pounds, besides having sold 14 swarms, during the past summer.

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☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in Adrian, Lenawee Co., Mich., on Dec. 3, 1884, in Plymouth Church Chapel. All bee-keepers are cordially invited to attend, and bring with them anything for exhibition that will be of any use or benefit to bee-keepers. Let all turn out and have a good time.

A. M. GANDER, *Sec.*
F. W. GILBERT, *Pres.*

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☞ The annual meeting of the Michigan State Bee-Keepers' Association will occur in Lansing, Mich., in the Senate Chamber of the State Capitol, Dec. 10 and 11, 1884, first session beginning at 10 a. m. on Dec. 10. This being the home of Prof. A. J. Cook, and the location of the State Agricultural College, it is expected that this will be the most interesting meeting ever held by this Society. A programme is being prepared, including several very important and interesting papers from Prof. Cook, T. J. Burrill, Dr. Beal, and R. L. Hewett, and several prominent apiarists from other States. A large delegation is expected from Canada. The question-box will be one of the important features. Come prepared to ask and answer questions. Reduced rates on all Michigan railroads, and at hotels in Lansing. The President and Secretary will be at the Hudson House. Notify me as soon as possible how many railroad certificates you will want, and over what road you will go, so I will have time to procure them. A cordial invitation is extended to all. Please come and bring your bee-keeping friends with you.

H. D. CUTTING, *Sec.*

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☞ The sixteenth annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 21, 22 and 23 of January, 1885. The executive committee are determined to maintain the high standing and enviable reputation which the Association has justly gained in the past, and at the coming convention they propose to outdo all former efforts. The meeting will surely be the largest and most interesting ever held in America. No bee-keeper can afford to stay at home. All are invited. All implements of the apiary sent to the Secretary, will be properly arrayed to compare favorably with others on exhibition, and will be disposed of or returned, as the owner directs. Reduced rates for board at hotels.

GEO. W. HOUSE, *Sec.*
L. C. ROOT, *Pres.*

CORRESPONDENCE

For the American Bee Journal.

The Pollen Theory.

JAMES HEDDON.

On page 743 Mr. Doolittle writes that a year ago he stated that bees of mature age do not eat pollen, except to form it into chyme for their brood, and further tells us that he has seen nothing since to alter that opinion, and that Dr. Miller's article in a late number of the BEE JOURNAL proves him to be correct. I do not see how the Doctor's statement and experience proves anything of the kind. Mr. Latham, on the same and next page tells us why mature bees do eat pollen, either in the form of bee-bread or floating in the honey, and why they must eat it, if they exercise, to renew the waste of tissue caused by such exercise. One correspondent has suggested that cold, causing the bees to exercise, and this exercising causing a waste of tissue, inducing the consumption of pollen, may be the indirect cause of bee-diarrhœa. The direct cause, however, remains—pollen.

I think that Mr. Latham errs greatly in his judgment as regards which we may call direct, and which indirect causes. When we notice an effect, we call its prime cause, the cause just immediately behind it. We know this cause is an effect of some other cause, and so on infinitely in either direction, making a first cause or last effect, something entirely incomprehensible. He says, "Whisky never caused intoxication when let alone; a prompting thirst induces the victim to imbibe, and inebriation follows." Now, according to Mr. Latham's logic, a drunken man has been made drunk, not by liquor dealers, license law, or whisky, but by a "prompting thirst."

Why do the Prohibitionists desire to obtain power? To make some laws, I suppose. Laws about what? "Prompting thirst?" When they have laws made, what are they going to do with "prompting thirst," should he violate them? I thought that it was highly proper to say that whisky was the prime cause of intoxication that came about by the drinking of it. I thought that the Prohibitionists proposed to stop drunkenness, if possible, by making some laws regarding its cause, intoxicating drinks; and if these laws were not obeyed by those who handle such drink (not prompting thirst), such persons would be compelled to obey them. I cheerfully admit that pollen is no more the prime cause of bee-diarrhœa than whisky is of a whisky drunk.

As my articles upon the subject will show—I have been looking for some cheap, practical system of manipulation that might rid the hive of most of its bee-bread, and see by experiment if we could get along with the rest. I am at that now, but it is too early to report yet. If the pollen theory be the correct one, then all past efforts to winter bees successfully, by all parties, have been direct experiments according to the philosophy of Mr. Latham's first proposition at the top of the middle column on page 744.

To sum up: if pollen is the cause of bee-diarrhœa, then the removal of combs containing it, and replacing of combs which do not, but contain plenty of oxygenized food, is a sure preventive. It is, further, the only one of which I know. Who knows of any other? As soon as any one does, let him report, and let us see if by his method the cost and labor is lessened. We have twice evidenced that the non-pollen method was a sure preventive. The coming winter will give us a third evidence, or a re-buttal to former evidence. If pollen is a cause at all, it is the prime cause; unless, perchance, breeding in confinement should prove to be the cause. "we will anchor by-and-by."

Dowagiac, ♀ Mich.

For the American Bee Journal.

Can Bees Be Bred to Fixed Types?

G. M. ALVES.

It is common to find in bee-literature the opinion that bees may, by the skill of man, be successfully bred to fixed improved types, as is done with ordinary domestic animals; and although we find so high an authority as Prof. Cook advocating that opinion in a recent number of the BEE JOURNAL, the writer nevertheless insists that such an opinion is held without due regard to practical difficulties, and is founded upon vague and misconceived laws of animal life.

Chief among the practical difficulties is, that the drones cannot be sufficiently controlled. True, if we had no other drones to contend with except our own (a thing scarcely to be expected), we could then do much towards the proper mating of the queens. But even in that case, could we succeed in mating all of our virgin queens with drones from a single selected colony—a thing in practice which we could not hope successfully to constantly do—we would even then have to assume that any one drone from that particular colony was as good as any other.

Would a skillful breeder expect to maintain the fixed type of a breed of hogs by accepting any one boar from a litter to be as suitable for his purpose as any other from the same litter? Those who think that he would, for the reason that they are all of the same blood, know little of the critical acumen of a skillful breeder. Now, if we hold that bees can be bred to a type because hogs can, are we not compelled, from the very nature of our *assumpsit*, to assume parallel laws in both cases?

But there is a broader philosophy underlying this subject, and a better reason why our bees may not, by our skill, be bred to improved fixed types; and that is this: Fixed breeds can only be maintained by fixed conditions of the animal life. If the surrounding conditions vary, the animal type will ultimately vary in harmony. An investigation of modern thought or an appeal to nature herself, properly directed, will convince any thoughtful mind, of the absoluteness of this law in all animal life.

In our ordinary domestic animals we may change their surrounding conditions, and hence produce different physical types. We may place the hog in such conditions that his shelter and food may be gotten with little exertion to himself, and hence in generations his extremities and other waste parts will relatively diminish, and his butcher meat will relatively increase in harmony with his new conditions. We may, by proper shelter and food, increase the mammary glands of the cow, and hence in generations she will conform physically in harmony to her new conditions. We may further hasten the improvement of our domestic animals by the proper selection of the sires and dams; but how are we to control any of these things in our bees?

We have seen that it would be impracticable to control their mating. The writer respectfully requests Prof. Cook to tell us how we can control their surrounding conditions; and if the conditions cannot be changed, will they not assuredly gravitate in harmony with that inexorable law of animal life, to its surrounding conditions—conditions over which we have little or no control?

Henderson, +○ Ky.

For the American Bee Journal.

Bees and Flower Colors.

CLARENCE M. WEED.

In a recent article in the BEE JOURNAL I attempted to show that the petals of flowers were for the purpose of attracting insects to carry pollen from one plant to another, so that the seeds would be more perfectly fertilized; and, also, that petals had been evolved from stamens. As stamens are almost universally yellow, it is natural to suppose that the primitive petals were also yellow; and the question arises, "How came these originally yellow petals to assume the many varied hues which they now possess?" A quarter of a century ago this question would hardly have been thought of, to say nothing of an attempt to answer it; but now, thanks to the researches of Darwin, Lubbock, Muller, Wallace and others across the Atlantic, as well as Gray, Beal, and scores of other enthusiastic workers in our own country, we can at least point to a very plausible solution of the question.

These researches have proved not only what has before been stated, that flowers with their colored petals are parts of the plant specially set aside to attract insects, but also that certain colors attract certain insects. Thus dandelions, May-weeds, and other white or yellow flowers are found to be most freely visited by two-winged flies, while bees and butterflies are most freely attracted to more highly colored ones. Think over the most important bee-plants and see how many of them are pink, purple, blue or lilac in color. True, there are some conspicuous exceptions, as sweet clover (but it will generally be found in such cases that nectar is unusually abundant), attracting the bees without high colors. Nature is very economical with her forces and places none of them where they are not needed.

Besides this evidence of the ability of insects to distinguish colors, we we have the conclusive experiments of Sir John Lubbock regarding the color-sense of bees. In these experiments, honey was placed on glass beneath which were slips of yellow, pink and blue paper, and it was found that the bees first selected that over the blue paper, thus proving not only their ability to distinguish colors, but their preference of blue.

But some one will ask, "How and why did the primitive yellow flowers commence to vary?" It is well known to gardeners that when the conditions of a plant are changed, it is likely to vary or sport, as it is called. This is especially true of the highly organized petals where variation is more likely to occur than on the rest of the plant. Chemistry also teaches that the composition of pink and yellow petals differs but little, and that a very slight change in the composition may produce marked differences in color. Hence, variation is very likely to be produced if a seed is carried by the wind, or otherwise, to a new locality.

To illustrate the theory now held by eminent botanists regarding the development of colors in petals, let us suppose a case of a flower of the primitive yellow, varying slightly to a white or pink color. Obviously, it will be more conspicuous than its surrounding non-sportive brethren; and, hence, will receive more visits from bees and other nectar-loving insects. Hence, as has been so often shown by Darwin and others, the seeds will be more perfectly fertilized, and will produce stronger and more thrifty plants. These resulting plants will be likely to have flowers with the original variation more strongly marked, which, in turn, being more conspicuous, will be more freely visited, produce thriftier plants, and so on until the progeny of the original sport will become a well established species.

Michigan Agricultural College.

Philadelphia Press.

Nectar or Honey-Dew.

PROF. A. J. COOK.

These terms are very old in our literature, and refer to drops of liquid sweet, often very minute, which are frequently observed on grass and on the foliage or branches of various trees and plants. These drops of nectar have been referred to by writers for the last 2,000 years; and probably were the subject of remark and inquiry as far back as the time of Aristotle. The first name, nectar, is very appropriate, as the substance is sweet and often very pleasant to the taste. Sometimes it is as light colored as the finest honey, while at other times it is as dark as New Orleans molasses, and, as if to illustrate that Nature has an eye to the fitness of things. The dark nectar is often quite odorous, so much so that when gathered largely, as it is likely to be, by bees, a rank, disagreeable smell will be observed about the apiary in place of the delightful odor usual to the bee-yard.

A few weeks ago, an apiarist being misled by this odor, was very anxious for fear he had, in his apiary, the dreaded malady, "foul brood," which is always characterized by a most disagreeable stench. Have not many readers, during the past summer months, as they have been walking, especially just at the beginning of twilight, perceived a very noticeable odor, which the physicians would liken to slippery elm, but which would remind the farmer boy of the diluted odor of the hog-pen? The cause of such odors is this same nectar. Often it so besmears the leaves of the trees that to grasp them, covers the hands with a sticky, unctuous liquid not entirely pleasant to the touch; not unfrequently the glittering drops may be seen to twinkle on the foliage, or as they fall from it, especially just at the dawn of morning. Sometimes it falls from the leaves, so as to stain the sidewalks or other objects beneath the trees.

The other term, honey-dew, is not so correct; for, though the sweet is well likened to honey, it is in no respect like dew. As is well known, dew collects from vapors in the atmosphere, while the so-called honey-dew never has any such origin, though it is quite impossible to persuade many persons, especially bee-keepers, that such is not the case. Even men of no mean scientific ability have often assented to this false view as to the origin of the nectar.

Occasionally this nectar takes the name "manna," and grasses from which it is secured have, in recent periodicals, been called "manna grass." Were this term in general use, I should think it a very appropriate name.

The sources of nectar of plants are very various. That secreted by flowers, through the agency of special cells, is best understood, and is without doubt to attract insects to the important work of fertilizing the flowers. Another source of nectar is special extra-floral glands, which are sometimes on the stalk, sometimes on the leaves and sometimes on the peduncles, or flower-stems. The cotton partridge pea show such glands, and afford such secretion. Prof. Trelease suggests that the function or use of such glands and secretion is to insure the presence of ants, wasps, and bees, which will destroy or frighten and drive off insect enemies of the plants. Prof. Trelease was led to this view while studying the cotton plant of the South. Such nectar—that from flowers and extra-floral glands, as also the sugar-laden sap or juices of many trees and plants—is never included in the term honey-dew.

The nectar known as honey-dew is also of diverse origin. As is well known, it comes largely from plant-lice. It may come from special tubes—called nectaries—or, as is more generally the case, from the glandular pores of the abdomen. It is very common to find the leaves of trees infested with aphidæ, or plant-lice, blackened by this nectar, or the fungi which its presence induces. The presence of ants in tree or shrub is almost always a sure indication that the plants were previously attacked by plant-lice. The ants repair to the place for the same nectar. Bees often collect this nectar in considerable quantities. I have often seen this sweet in large drops sufficiently ample to be sampled without difficulty. Of course I sampled it, and have always found it agreeable to the taste. It might not be wise to label honey "Plant-Louse Honey," but I am free to say that some of the best of honey might be thus truthfully labeled. I have found the plant-louse nectar of the larch and elm particularly pleasant in flavor.

The near relatives of plant-lice, bark-lice, also secrete a large amount of nectar. This bark-louse or scale-louse nectar, unlike that from the plant-lice, is dark, of strong odor, and ill-flavored. As scale-lice flourish best in dry seasons, so in years of drought this bark-louse nectar will be most plentiful. The present season, and also the year made memorable by the Chicago fire, were both marked by the great amount of this bark-louse nectar. During the present season, tons of honey have been stored by bees, the source of which was these same bark or scale lice.

While many do not object to the flavor of this honey, it is dark and rank, and as it in many cases was mixed with the clover honey, its presence was a sore misfortune to the bee-keeper. For my own part I would never put such on the market, as I would never use it on my table. As I have often stated, I believe that the cause of the great mortality among the bees in the winter following the Chicago fire was due, in part at least, to this bark-louse honey in the bee-hives. I think, however, that the flavor of the nectar that season was considerably more rank than it is this summer, possibly owing to its being less mixed with other and better honey.

These nectar-secreting bark-lice are very common here, and in many Northern States. Myriads of them are now in our basswoods, maples, hickories, sassafrasses, white ashes, and elm, pumping up the sap and excreting this bitter, odorous sweet. The very atmosphere is tainted, and when the bees can do no better, they accept this nectar of questionable reputation. The bee-keeper must watch for this unsavory nectar, and when it abounds he must see that it is not mixed with the fine grades of honey. By use of the extractor it will be easy to keep this separate. As this nectar will keep the bees busy gathering in time of no nectar bloom, it will keep the colonies breeding, and as it will be good food for bees during summer, it will do no serious mischief to one who is informed as to its use and abuse.

Lately, I have received several samples of what has been styled "manna grass," by those sending it. It comes from Ohio and Michigan. The grass was speckled with chrystals of sugar, much as though it had been dipped in sugar syrup. Placed on the tongue, it seemed as if it might have been sprinkled with granulated sugar. The sweet was very pleasant to the taste.

Upon close examination, I found that the grass was the seat of a thrifty plantation of ergot. Many of the seeds or kernels had the purple-black ergot grains. I gave the ergot to Dr. Grange, our veterinarian, and told him of the coating of sugar, which I supposed must arise from insects, though I could find none of the latter.

Soon after, Dr. Grange kindly referred me to a work on veterinary medicine, where ergot was described and the honeyed secretion given as a characteristic marking of the early stages of this poisonous fungus. In looking up this subject I find that European writers often speak of this nectar from ergot, and of insects collecting it. The ergotized grass, in Quincy, Mich., was thronged with bees, which are reported to have secured excellent honey from it.

Ergot, as is well known, is a fungus much used in medicine. Its use induces spasmodic contraction of the involuntary muscles. When eaten by man, as it is wont to be in ergotized rye, it produces inflammation of the eyes, chills the extremities—probably by contraction of the asterioles—induces swelling of the joints, which is speedily followed by gangrene of the limbs and bowels, and death by convulsions. As Bonjean and others have shown, if the ergot of plants is eaten by cattle and others of the lower animals, disease and death are produced, with much the same symptoms as mark ergot poisoning in man. It is stated that there have been many epidemics in Europe caused by ergot poisoning.

We see, then, that in ergot, Michigan has a most unwelcome visitor, and that there is a very dark side to this ergot picture; but it is pleasant to think that here as in most of Nature's products and life's experiences, the sweet is liberally mixed in with the bitter. I remark, in closing, that in this fungus we have another source of nectar not before noticed in our American literature.

* * *

☞ The Willamette Valley Bee-Keepers' Association will hold its second meeting at La Fayette, Oregon, on the third Tuesday in June, 1885. All who are interested are invited to attend.

E. J. Hadley, *Sec.*
F. S. Harding, *Pres.*

For the American Bee Journal.

Continuous Passage-Ways in Hives.

J. E. POND, JR.

I notice that some of our apiarists are endeavoring to establish the claim that bees will not work as well in sections, where they are placed directly on the frames, as they do when a bee-space is used between. This has not been my experience, and I have given the matter a pretty fair test during the last season. I will confess that as one who learned his bee-lore in the first place from Father Langstroth, I was much prejudiced against doing away with a bee-space, and was more than incredulous in regard to the same; in fact I was so prejudiced in favor of the bee-space that it was with great difficulty that I was persuaded to make any tests in regard to it.

However, I was presented with so strong a case both theoretically and practically as to the superiority of a hive provided with continuous passage-ways, and the plan operating the sections on it, that I was induced early in the season to try such a hive. I was so fortunate as to have my colonies all very strong in time to take advantage of fruit bloom, and on its first appearance, I gave sections to 3 colonies of as nearly as possible the same size and strength, one of them being placed in a hive provided with continuous passage-ways, the others being in Langstroth-Simplicities, with an ordinary section-case. The result was that the colony in the former hive went at once into the sections, and filled and capped nearly all of them (30), while the bees in the other hives did not work up into their sections till apple bloom had almost entirely passed away.

This I did not look upon as a full test, although strongly in favor of the continuous-passage-way method; consequently I was not satisfied, but on the appearance of white clover, I changed the colony in the hive provided with continuous passage-ways with one of the others above mentioned, and strange to say, the evidence was so strong that I was convinced; the colony which did not work well in sections in the Langstroth-Simplicity hive with ¼-inch bee-space, went at once into the sections upon being placed in the hive provided with continuous passage-ways; while the other 2 colonies, one of them being the one which was taken from the hive with continuous passage-ways, spent some four or five days before they did anything in their sections.

I consider the tests which I have described, fairly conclusive; and so much so are they to me, that I should use the continuous passage-ways if I were working for surplus comb honey. No separators were used, yet not a section did I find which could not be glassed; and so little propolis was placed on them, that it was hardly appreciable. I presume if I had a hive and section different in principle from the one of which I am now writing, which I was offering for sale, and urging as the best to be found, I should not make the above statement; but such is not the case. I have no interest whatever in the sales of any hive or supplies of any kind; but my belief is, however, that the continuous-passage-way idea is the correct one in producing comb honey in sections, and that the continuous passage-way will, ere long, be recognized as the best, and firmly established as one of the great recent improvements.

It stands to reason as a matter of theory, that our bees will use an unobstructed path more freely than they will one which contains various obstacles; when practice is found to be just what theory indicates, a case is made out, and in my experience practice proves just what the theory indicated.

I had no trouble at all with the queen occupying the sections; for the reason, I suppose, that she had plenty of room below, and the bees filled the sections so quickly that she had no chance to get into them, even had she been so disposed.

I have written the above in the interest of apiculture, for I believe it a duty which we all owe each other to make such tests as we can conveniently, and give the results, whatever they may be, for public use. By this means the public will be benefitted, either in one way or the other, as all the experiences of the fraternity when collated become a great chart, whereby we may learn where the deep water lies, and also where the shoals and quicksands may be found.

Foxboro, Mass.

* * *

For the American Bee Journal.

Large Combs to Prevent Swarms.

G. M. DOOLITTLE.

Some bee-keepers seem to think that large frames of comb used in a hive have a tendency to prevent natural swarming, and for this reason advise resorting to the use of such combs by all those who desire no swarms; but after years of careful experiment, I fail to find that the size of the frame has anything to do with swarming, unless, perchance, some few weak colonies, in the spring, are so slow building up on these large frames, that the honey season is past before they get strong enough to swarm. As such weak colonies are of little value to the apiarist in any event, it has little bearing on the subject one way or the other.

After working several different styles of frames, from the Quinby down to the Gallup, I decided that the Gallup frame gave me all of the advantages which the larger frames did, and some not possessed by them. For this reason I decided on the Gallup frame as the best frame in use, and after years of experience with it, I still hold to the same opinion. While using the larger style of frames, I experimented relative to the effect which each kind had on natural swarming, and became convinced that if the same number of square inches of comb were given each colony, that there was no difference in the results; while, if the same number of frames were used in a hive, the small frames gave the most swarms.

But here came the trouble in using so many large frames; the bees would have plenty of room in the hive below to store honey, and after once commencing to store honey there, they would crowd the brood nearly all out before they would go into the boxes or sections, and the result would be little or no honey in the sections, with a colony weak in bees to go into winter quarters.

As a part of these experiments were conducted before the honey extractor came into use, I found that by using the large hives, I had nearly all the honey in an unsalable shape; thus the large hive with its few swarms did not yield me one-half as much profit as the smaller hive with its small frames. I now reduced the number of large frames so that six of them represented the same amount of comb space which nine of the small ones did, when I found that after the colonies in each kind of hive were of the same strength, they would produce equal results as to honey and swarms.

After I procured an extractor, I tried emptying the combs as fast as filled in the large hive, so as to give the queen room in which to lay, hoping that thereby I could get a good yield of honey in the sections with but few swarms. At the end of the season I found that I was beaten again; for as long as I extracted from the brood-chamber, no honey was put into the sections, so I decided that there was no sure way of getting a good yield of honey in sections except by a moderate increase, which is the conclusion all arrive at sooner or later.

As the Gallup frame was more to my liking than the unwieldy Quinby or American, I gave the latter up after trying one more experiment, which was to try the two sizes of frames side by side for extracted honey, as it was claimed by some that the small frames could not be worked for extracted honey without more or less swarms. As some advised the use of half combs in the upper story, the saving of time claimed by many in handling the combs while extracting, was found to be a myth, as the loss in the handling of the small frames more than balanced the time gained with the large ones. Hence, the only advantage the large frames could possibly have, was the fact (if such it should prove to be) that they would give no swarms, while the small ones would.

To test the matter, a given number of each was set apart, and before the honey harvest commenced, room was given in the upper story to each in about the same proportion by placing in them empty combs. When these were partly filled, more was put in until some were three tiers high. The result was, that not one swarm issued from either size of frame, and I fully believe that the small frame is just as effectual in preventing swarms as the large one, where both are worked for extracted honey.

Any sized frame can be used upon the non-swarming plan, when the apiary is worked for extracted honey, provided the upper set of combs is so that the bees have free access to them. However, if thus used, more or less brood will be found in the upper set of combs, especially if the season should prove a poor one. In fact I have had, during the past season, the queen and "all hands" move upstairs so that there was neither brood nor honey in the lower hive. I have tried the perforated zinc to some extent to remedy this, but so far it has not proven satisfactory, on account of its giving the bees a disposition to swarm the same as they do when working for comb honey.

If brood is placed above the zinc, the bees seem to consider it isolated from the main hive or cluster of bees and go to rearing queen-cells on it, from which cause they are almost sure to swarm as soon as the cells are sealed. If no brood is thus used, they swarm from failing to take possession. Perhaps if the frame of brood were taken out just before the cells were sealed, the bees would continue to work and no swarming would result. With a good honey year, and where the extracting is all done at the end of the season, it is of little consequence if the queen does go up-stairs to lay; and by allowing her to do so, swarming is surely prevented in my apiary.

Borodino,⊙ N. Y.

For the American Bee Journal.

Northern Michigan Convention.

The meeting of the Northern Michigan Bee-keepers' Association was held in Greenville, Mich., on Oct. 6 and 7, 1884. The Association was unfortunate this year in selecting a time for holding its meeting, which proved rainy, but as bee-keepers are not easily discouraged, the meeting was held. Questions both intricate and delicate, specific and scientific, common and proper, and ancient and modern were discussed with untiring zeal and energy, and without fear or favor.

I need hardly say that wintering bees was the most thoroughly discussed. The usual variety of plans and failures was suggested. One fact in this connection is especially worthy of mention: Those familiar with cellar, "clamp," and out-side wintering generally agreed that bees were less liable to dwindle in the spring when wintered on the summer stands, and gave as a reason that the bees know by experience the danger in wintering unprotected in unfavorable weather.

One bee-keeper reported quite satisfactory results by wintering bees on the following plan: 1. The hive entrance to be ¾ of an inch high by 10 inches long, and giving plenty of lower ventilation. 2. A large box to hold the hive, so as to give space for 3 or 4 inches of sawdust around the sides, and a couple inches of chaff on the top. The quilts must be clean and free of propolis, so that dampness may find a ready exit through them and the thin layer of chaff. Sticks are laid crosswise on the frames on top to allow passage for the bees; and the hives are set facing the east to avoid winds blowing into the entrances.

The following plan was given as an experiment: A trench, say 3 feet deep made in sloping ground, to be provided with 50 or 100 feet of small tile laid low enough to carry off water, and to preserve a uniform temperature of fresh air. The lower end of the tile should be covered with wire-cloth to keep out mice, and a large perforated box placed over it to prevent snow from clogging up the same. The trench should be wide enough to allow a single-walled hive to set inside of it, and be boarded up to prevent the sides from caving in. Cleats nailed on the sides will prevent the hives from dropping nearer than 10 inches from the bottom of the trench, thus leaving a sufficiency of room for dead bees below. Place the hives, without bottom-boards, into the trench and cover them well with boards and dry earth. At the upper end of this trench place a ventilator 10 or 12 feet long in an upright position, so as to create a draft and carry off all foul gasses. This ventilator may be made of 1x6 inch strips of boards, and will answer the purpose.

Heddon's "pollen theory" was generally accepted as correct, though a few objected to it. "How is the aggregate strength of bees, and stores reduced during the winter if the bees do not fly?" This question drew out quite a discussion, and was treated in connection with ventilation, and the general opinion expressed was that without proper ventilation dampness will destroy the strongest colony.

Artificial fertilization was discussed and some interesting facts brought out in connection with the spawning of fish. All talk on this subject was purely speculative. The question, "Which pays best at present prices, comb or extracted honey?" was decided in favor of the latter, with more ready sale for the former. At a time when honey was coming in slowly 2 colonies of the same strength were experimented with, empty combs being placed in one hive, and a section-case on the other. The empty combs were gradually filled while the case was untouched.

"What shall we do with our poor grades of extracted honey?" A spirited discussion followed this question. Some favored selling it to the lower class of boarding-houses, mill men, etc., without comment as to quality. Some advised selling it to merchants, and insisting upon their retailing it as poor honey; while others thought that people would be prejudiced against the best honey by using the poor quality. All endorsed the following plan: Sell it to the tobacco manufacturers; for our poorest quality of honey cannot injure their finest "weed." Good extracted honey for table use among bee-men is beginning to be the rule, and not the exception.

A number of apiarists reported a home market for all their honey. Extracting when the combs are two-thirds sealed was considered preferable to Dadant's plan of waiting until the honey season is over. One-pound sections were the smallest exhibited or recommended. Samples of honey produced without separators were entirely satisfactory. Honey-boards are but little used by any of our members.

Mr. Youngman told all about bees evaporating nectar on the wing. His proofs were satisfactory. That Italian bees are best for this country was conceded by all. Mr. Youngman described his plan of securing good queen-cells; but as it was published last year, we will not reproduce it.

A good display of apicultural literature, tools for use in the bee-yard, wired foundation in frames, one and two piece sections, shipping and retailing crates and honey in large and small sections, etc., added to the interest of the occasion.

By request of F. A. Palmer, the next annual picnic will be held at his residence on the last Thursday in May, 1885.

The following were elected as officers for the coming year: President, S. J. Youngman; Secretary, F. A. Palmer; Treasurer, Mr. McBride; first Vice President, L. L. Bissell; second Vice-President, Edwin Hunt; third, Mrs. A. M. Sanders; fourth, J. H. Robertson; fifth, L. S. Benham.

A vote of thanks was tendered Mr. J. E. Gault for the free use of his hall, after which the Convention was adjourned.

In regard to the picnic of this Association, held at Ionia, Mich., on June 19, 1884, I append the following: At the last Convention previous to the one above reported, a motion was carried that a bee-keepers' basket picnic be held during the summer of 1884 at the residence of some active bee-keeper. Miss Bellamy, of Ionia, Mich., being the first to invite the picnic, her request was granted, and a call was issued.

On the morning of the day selected, several teams were in readiness to convey people from the trains to the grounds. Arriving there, we found Miss Bellamy, smoker in hand, busy with her bees, giving all an opportunity to study her methods and profit by her experience. Not a few of us who had made a success in bee-keeping were anxious to know how she was able to report at our last Convention better results than any other person present.

The day was pleasant, though very warm; but before noon 30 or 40 bee-keepers might have been seen in busy groups among the bees, or under the shady trees, while others were seated in the spacious parlors, all intent upon the one object of discussing the mysteries of bee-keeping. The hour of noon arriving, "a go as you please" dinner was in order. Hot tea and coffee was served at the family table, with other refreshments, to all who desired them; while others literally carried out the spirit of the picnic, by basketing under the lofty shade-trees.

After dinner, all being seated on the grass, a semi-formal meeting was held, and resulted in a vote of thanks to Miss Bellamy and her friends, and in receiving several new members into the Association.

At 2:30 p. m., those coming by rail were obliged to leave for home, being pleased with the people whom we had met, and with the success of our first picnic.
F. A. Palmer, *Sec.*

For the American Bee Journal.

Working Against Nature.

DR. G. L. TINKER.

All experience has shown that in any direction the greatest success with bees is to be attained by conforming as nearly as possible to their instinct and nature. As a rule, there is probably no exception to it, yet we find methods recommended every now and then which are not in accordance with the natural impulses and habits of the bees. Such methods may be moderately successful under certain conditions, but there are other conditions sure to arise out of which trouble and, perchance, disease may come.

One of these instances is recorded in a communication in the Bee Journal, by Mr. C. Mitchell, in which he says: "I would like to say, in justice to Mr. Heddon, that I think that the very dry season had a good deal to do with the strange intercourse of some of my swarms, after working on his plan, in trying to rob, and not being properly recognized as strangers." Mr. Heddon will understand the need to perform all work with bees in accordance with their instinct, and has often reverted to this fact. Why he should recommend his plan of controlling after-swarms in view of the other facts which he has set forth, I am at a loss to determine; for it is plainly contrary to nature, and in the practice above quoted, does not appear to have been a safe procedure.

No doubt, in the near future, it will be necessary for many bee-keepers to control increase in some way; but that plan should be the most natural as well as the most profitable one, which I venture to suggest his is not. If primary swarming does not tend to lessen the yield of surplus comb honey, as alledged by Mr. Heddon, and held by myself and many others; and again, if "the largest yields on record have come from colonies which cast not only one, but two and three swarms" as further alledged, it does not appear that there is any need to be in a great hurry to mix up and double up colonies where increase is not desired. Mr. Heddon's logic is opposed to both his theory and practice. If the largest yields on record have come from different practice than that which he so fully recommends, why mix up colonies by moving the old one about the new one to drain it of its bees, prevent it from making any surplus, and run the risk of causing wholesale robbing? We should say, if a "readily-movable" hive is to be commended for this purpose specially, it is not so invaluable as it might be.

Mr. Heddon's plan of controlling increase, no doubt contemplates obtaining the most surplus; but if we are to believe him, the largest surplus is obtained where swarming is allowed strictly in accordance with the instinct of the bees. Yet the limit to swarming should be to the prevention of all after-swarms; for the chances of a protracted yield of surplus are few and far between. My course has been to cut out queen-cells and return after-swarms, or to cut out all the queen-cells but one, and I doubt if there is a better plan, whether we consider the amount of surplus to be gained as the convenience of the bee-keeper.

As to the increase: It occurs to me that if colonies are to be doubled up, the proper time to do it is in the fall or after the season's operations are completed. With right management there is every reason to believe that it may be done not only with success in wintering, but with advantage and profit during the following season. My experience in doubling up weak colonies in the fall, justifies me in thinking that the uniting of full colonies late in the season will prove the most promising method of reducing undesirable increase.

New Philadelphia, O. Ohio.

For the American Bee Journal.

Progressive Bee-Keepers' Convention

The bee-keepers of McDonough and adjoining counties met in Bushnell, Ill., on Nov. 20, 1884. The meeting was called to order by Mr. J. G. Norton, who announced its object. Mr. A. W. Fisk, of Bushnell, was appointed chairman. A committee of three was then selected on permanent organization; after a few minutes they presented the following names for office, to be voted on by the Association. President, A. W. Fisk; Vice-President, Samual H. Moss; Treasurer, Miss Cora Castle; Secretary, J. G. Norton. A constitution and by-laws were then adopted, and after a short discussion it was decided to adopt as a name, "The Progressive Bee-Keepers Association of Western Illinois."

The annual dues were placed at 25 cents per member; ladies to be admitted free. The convention then adjourned to meet at 6 p. m.

The convention was called to order at 6 p.m. with President A. W. Fisk in the chair. Samuel H. Moss gave his report for the season. He said that he commenced the season with 90 colonies, increased them to 130, and then doubled them back to 120. He had taken 2,200 pounds of comb honey, and 1,000 pounds of extracted. His increase of colonies was obtained by natural swarming. He packs the upper stories of the hives with chaff, and leaves upper passages.

Wintering bees was discussed to considerable length. J. M. Hume uses chaff-hives with chaff over the frames and upper passages.

The President leaves upper passages, and uses porous covering over the frames.

The Secretary uses chaff-packing cases with upper passages and chaff over the frames. T. C. Rundle uses oil-cloth over the frames, and finds no objection to it. Upper passages were discussed at considerable length, but the majority claimed that while bees came to the top of the frames, they did not pass over at all in cold weather, and only moved or changed position when it was warm enough to fly.

The Langstroth hive was considered the best by all present. The association consists of 30 members representing 600 colonies of bees.

Adjourned to meet on the first Thursday in May, 1885, in Bushnell, Ill. J. G. Norton, *Sec.*
A. W. Fisk, *Pres.*

For the American Bee Journal.

How Many Colonies?

W. Z. HUTCHINSON, 68—94.

This practice of indicating by figures, at the end of the writer's signature, the number of colonies owned on the first day of the previous May, and at the present time is, I believe, Dr. C. C. Miller's "baby." It has been somewhat backward in "learning to walk," but its parent ought not despair; slowness of growth is often an indication of longevity.

"What is the object of this plan?" is a pertinent question. Briefly stated, it might be said in reply that it assists the reader in forming an opinion of the value of the writer's assertions, views and conclusions; it gives, to considerable extent, the breadth of the writer's experience; and helps to show how good an authority he is upon the subject with which he may be discussing.

In opposition to the plan, it has been urged that it would not find favor among the owners of small apiaries, that they would not be willing to thus "expose their ignorance," or rather their lack of experience. Those who have urged this objection should remember that there are many subjects connected with bee-keeping upon which one may become excellent authority, and yet never own a large apiary. Especially is this true in regard to purely scientific subjects, requiring close study, careful observation, and faithfully conducted experiments. I believe that Mr. Muth has never owned a large apiary, but he is excellent authority upon foul brood. Prof. Cook has never managed a large number of colonies, but who is a better authority upon subjects relating to the natural history of the bee? But when John Smith writes: "I have practiced, this season, the Heddon method of preventing after-swarming, and it works like a charm;" or "I have discarded foundation in the brood-frames, as I consider its use in that place unprofitable;" or "I have used the Jones' perforated-zinc honey-boards this season, and not a queen has passed through them;" or, but why enlarge when we read of such things as these, we would really be glad to know whether the writer is the possessor of two or three colonies, or of two or three hundred colonies.

When a new contributor writes from some cross-roads in Michigan, and his signature is William Jones, we know nothing in regard to him, unless it is disclosed in his communication; but let the name of his post-office be followed by one of those little signs, the use of which was suggested by Mr. Doolittle, and his name followed by the figures indicating the number of colonies kept, and we will know that Mr. Jones lives, for instance, in Eastern Michigan, began the season with 40 colonies, and has increased them to 75; and he is at once given a "local habitation and a name—" an "apicultural standing."

I think that but few, if any bee-keepers are opposed to telling, in this manner, how many colonies they have, but they "forget" to do so.

Rogersville, ♂ Mich.

SELECTIONS FROM OUR LETTER BOX

Denies the Soft Impeachment.

Some have accused me of owning a bee-paper printed in New England; but I wish to say, through the Bee Journal, that I do not now and never did invest one cent in any bee-paper. I have no interest in any of them except in their general welfare. I wish that each one of them had 20,000 subscribers. I think that any one can get enough out of one issue of any of them to pay the cost of one year's subscription. Although there is one printed monthly within six miles of Wenham, I have not seen half a dozen copies of it during the past year. I hope that none will hereafter say that I have any money invested in any publication.

Henry Alley.
Wenham, ♂ Mass., Nov. 21, 1884.

A Peculiar Season.

My report for the past season is rather a poor one. The season has been different from any which I have ever seen. The last winter being a very bad one, the bees which did come through were weak, and it took some time for them to build up; but when white clover bloomed they filled their hives and began to work finely in the sections. It continued only seven days when the bees left the clover for the honey-dew. They commenced on the honey-dew in real earnest, when they should have been working on the white clover; but that lasted only for a short time. After July 1 there was no honey until the last of August, when the bees worked diligently on buckwheat, smart-weed and Spanish-needle. This continued for only a few days, when the flow of honey ceased, the flowers being in full bloom, the nights were warm, the weather was not dry, and there was a world of bloom ten days after the bees quit work. I had 27 colonies, spring count, increased them to 45, obtained 1,500 pounds of comb honey and sold it at home for 15 and 20 cents per pound. I could sell 5 tons if I had it. There are farmers near me who buy 100 pounds of me for their own use. The largest amount taken from one hive, during the season, was 135 pounds.

D. R. Rosebrough.
Casey, ○+ Ill., Nov. 19, 1884.

Well Satisfied.

This season is said to have been a poor one in this State, but I am satisfied. I bought 2 colonies of Italian bees on May 1, 1884, and managed them in Langstroth hives, as directed in the Bee Journal, and as intelligently as I could. The result is 160 pounds of comb honey per colony, spring count, with from 40 to 60 pounds yet in each brood-chamber. I increased them to 5 colonies, and put them into the cellar on Nov. 18. The bees are in good condition, being well packed, and the cellar is well aired and ventilated, so I confidently expect to meet with success in wintering. I have just the amount of honey which myself and family can conveniently consume.

Ezra J. Cronkleton.
Dunlap, +○ Iowa, Nov. 24, 1884.

Light Honey Crop.

The weather has been very nice up to this time, and my bees seem to be in good condition. The honey crop in this part of the country was very light. I had 30 colonies, and increased them to 53. I found 2 swarms, this fall, in the timber, and so I now have 55 colonies. About one-half of my bees are the natives, the rest of them are Italians and hybrids. My crop of honey amounted to about 600 pounds. Although the fall weather has been very nice, with no frost, yet the late fall flowers seemed to dry up and the bees did not appear to gather much honey from them. I use a good, double-walled hive, and 1½-pound sections.

A. Gibson.
Ponca, ♂ Nebr., Nov. 25, 1884.

An Unfavorable Season.

This has been an unfavorable year for producing honey in this section of the country. Our honey-flow lasted from about June 10 until July 4. I began the season with 20 colonies, increased them to 29, and received 628 pounds of honey, about half of it being extracted and the balance comb honey. I had to feed 300 pounds of honey to my young colonies, or they would not have had enough to supply them during the coming winter. All of my colonies are now in good condition, excepting 3 or 4 which are not very strong, for we have a cider mill near by which ground up millions of bees every day. I winter my bees on the summer stands, and use a large hive 24 inches wide by 13½ inches long and 15 inches high on the inside, with two division-boards to keep the bees in the middle of the hive during winter; then it is packed with dry leaves behind the division-boards, putting two strips of cotton-cloth over them, and filled with leaves on the top 10 inches high, with a straw mat on top to keep the leaves down, and a roof with an inch hole in both ends so the air can pass through. I also pack leaves outside at the rear from top to bottom; the entrance of the hive is 5 inches long by ⅜ of an inch deep; an inch hole is about 5 inches above the entrance. and the hives are set facing southward.

HENRY ERBROTD.
La Harpe, +o Ill., Nov. 23, 1884.

Bee-Keeping in Lcuisiana.

This year, my yield from 165 colonies, spring count, is 11,800 pounds of extracted honey, and 650 pounds of comb honey in one-pound sections. I increased my apiary, by natural swarming, to 240 colonies. I live on the bank of the Red river, which overflowed twice during this year, and caused me a great loss. The water was 2 feet deep in my bee-yard, and I had to put my hives upon rail pens. Near me there are over 1,000 colonies of bees on a circle whose radius is four miles.

WM. J. DAWSON.
Dixons X Roads, ⊸ La., Nov. 15, 1884.

Nicest Honey of the Season.

On Nov. 17 I shipped 110 crates of comb honey by freight to Chicago; and on Nov. 22, our consignee wrote as follows: "The honey arrived in good order, and is the nicest lot of honey I have had this season." It was produced without separators.

W. Z. HUTCHINSON, 68—94.
Rogersville, ♂ Mich., Nov. 27, 1884.

Bees Flying.

We have had fine weather during the last two days. The butterflies are out again, and the bees are flying everywhere. As we had two light snow storms, and I had my hive entrances opened full width for winter, I had to partly close them this morning. Many bee-keepers have their bees in cellars, and now they are missing a good flight. The honey-flow was cut off very early here, still I obtained 3,000 pounds from 55 colonies, many first swarms having gathered no surplus. I would like to say, in justice to Mr. Heddon, that I think that the very dry season had a good deal to do with the strange intercourse of some of my swarms, after working on his plan, in trying to rob and not being properly recognized as strangers. My bees have bred none since August, and they will be seven months old before replace, which will test the late breeding pretty well. Will Mr. Deadman, of Ontario, please state how many colonies he has at present? His method of wintering bees ought to be attended with success; but his way of feeding will soon be dropped, I think.

C. MITCHELL.
Molesworth, Ont., Nov. 17, 1884.

Bees Ready for Winter.

On Nov. 18, I placed my bees in the cellar, all being in fine condition, and each colony having from 25 to 35 pounds of well sealed honey. Since that time we have had cold, rough weather.

F. M. TAINTOR.
Elm Grove, ⊸ Mass., Nov. 26, 1884.

An Italianized Apiary.

This has been a very poor season for the apiarist, in this section at least, except he esteems his experience of sufficient value to compensate him for his time, trouble and outlay. There was an abundance of fruit bloom and white clover; but a dearth of nectar in the flowers, all through the season, especially so in the earlier months. I had 17 colonies to commence with in the spring, and I had but 2 natural swarms, and 2 made by division. Some of my bees did so poorly that they had to be fed until Aug. 1, to prevent starvation; since that date they have gathered enough honey to winter on, by taking from the richer ones and helping the poorer. I obtained perhaps 50 pounds of surplus honey from all. While there was no honey being stored, I thought it a good time to Italianize my colonies. I had a tested Italian queen from last season, and this season I reared and successfully introduced 20 young Italian queens. By screening the black drones out, before introducing the young queens. I think that most of them are purely mated. So, if it is an advantage to have young queens in an apiary, I will be favorably equipped in that respect next spring, if I succeed in wintering them.

J. A. BLACK.
Pleasant Mound, ♀ Ill., Nov. 24, 1884.

Do Bees Hibernate?

As this subject is now considerably agitating the minds of bee-keepers, I desire to give my experience on the subject. Several winters ago, while in the woods, my foot broke through the earth about half knee-deep. I examined the opening in the ground and in it I found a nest about the size of a gallon crock. In the nest was what people in the West call a prairie grey squirrel, which was hibernating; *i. e.*, it was neither dead nor alive. It was curled up in a circular form and after I would straighten it out it would curl up again. It did not breathe and its heart did not beat. I took it to the house and placed it on the hearth, occasionally turned it around, and in a few moments it came to life, as you might say, and was as lively as anything I have ever seen. Now is this not a perfect example of hibernation? My experience teaches me that it is not natural for bees to hibernate, yet they may go into this condition when compelled to from exposure, and that they will remain in this condition for 48 hours if not exposed to a temperature of 32°; and so I claim that it is not natural for bees to hibernate, but exposure causes them to do so. I have experimented with those chilled or hibernating bees, having taken full colonies into the house and warmed them just as I did with the squirrel, and this fall, in getting the bees to carry honey from the upper to the lower story of the hive, on the empty combs in the upper story, on a frosty morning, I found small bunches of bees which to all appearances were dead; but after being warmed they would revive, and in every such case of reviving they would show signs of bee-diarrhœa; some worse than others, owing to the length of time which they had been chilled. What I am trying to get at is this: Do bees which winter on the inside of a cluster, at a temperature of 80° to 100° above zero, ever have bee-diarrhœa? I think not. I am satisfied that the young bees winter in the center of the cluster, and I have found by experiment that the temperature on the outside of the cluster is from 70° to 80° lower than that of the center.

WM. MALONE.
Oakley, ♀ Iowa, Nov. 22, 1884.

Keeping Bees on Shares.

Will Mr. Heddon please give his opinion on taking bees on the shares, or on what condition bees are generally let? One man offered me 100 colonies, last spring, on the following conditions: I was to take the 100 colonies and buy 100 new hives complete for $4 each, for the swarms, and I was to receive half of the honey and half of the swarms; and in the fall he was to take the 100 colonies which he let me have in the spring, half of the honey, and half of the swarms, making the new hives cost me $8 each. I proposed to take his bees in this way: I was to take the 100 colonies in the spring on the same conditions as above, except that he was to furnish half of the hives and I the other half.

T. W. DOUGHERTY.
Princeton, ♂ Ill., Nov. 24, 1884.

Report for 1884.

Last winter, out of 31 colonies I lost one, and from the remaining 30, this season, I have received 800 lbs. of comb honey in one-lb. sections and 200 lbs. of extracted. I had 50 swarms, and I am going to try to winter 35 colonies in my cellar this winter.

JOHN L. DAVIS.
Holt, ⊙ Mich., Nov. 25, 1884.

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☞ Mr. D. A. Jones of Beeton, Ont. has sent us a copy of his Winter Catalogue for 1884. It contains 32 pages, and is well printed.

◆

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

Local Convention Directory.

Time and place of Meeting.

Dec. 3.—Southeastern Mich., at Adrian, Mich.
A. M. Gander, Sec.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.

1885.
Jan. 6.—Southern Wisconsin, at Janesville, Wis.
J. T, Pomeroy, Sec.

Jan. 14.—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

Jan. 21—23.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec.

June 19.—Willamette Valley, at La Fayette, Oreg.
E. J, Hadley, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Bees Acting Strangely.

I close my hives every night and open them about 9 o'clock in the morning, if the day is warm. I notice when I open one of the hives, a few bees rush out and some try to fly, but only get away 2 or 3 feet from the hive when they fall to the ground, appearing to be weak. Please give me some explanation of the above.

Geo. Klitch.
Ewing♀, Ind., Nov. 22, 1884.

Answer.—It is caused by your imprisoning your bees. It is not best to close hives at any time, except when they are being moved. Such imprisoning gets up an agitation and heat, and ruins some of the bees, which causes them to "fall to the ground." If the outside air is cold, that would assist in causing them to fall.

Shipping Bees.

Will Mr. Heddon please describe the best method of packing hives of bees for shipment in a stock car?

E. Sandford.○→
Nokomis, Ills., Nov. 19, 1884.

Answer.—If they are to be shipped at this time of the year during cold weather, with no brood in the hives, they will not need the same preparations which they would require in May. Much depends upon the style of the hive and frames, and whether or not the frames are wired, how old the combs are and how heavy with honey. It seems as though this short question demanded too long an answer for this department, if the answer were to be explicit enough to be of much value. I think that this department, in back numbers of the Bee Journal for this year, has something upon this subject.

Is Honey-Dew Poisonous?

But why call it honey-dew? for, according to Prof. Cook, it is neither honey nor dew. After reading all that has been written on honey-dew as being "vile stuff," "vile trash," I am lead to ask a few questions about it. On page 723 Mr. L. E. Webster says of selling honey-dew, that it has occurred to him that there might be some way to prevent such frauds. Of course he has reference to those selling it; but will not the same apply to the bees? for they certainly gather and store it in the boxes with white clover and other honey; and how shall we prevent them, as it is hard to foretell from what a bee will gather its load when it starts in search of sweets, and just where it will deposit its treasure upon its return? If Mr. L. E. Webster, or any one else, can give us a practical rule (not merely theory) by which we can stop the bees from perpetrating such a gigantic fraud on us (this sounds a little harsh), as gathering honey-dew for honey, then, and not till then, can we guarantee our honey pure. Unless these questions can be answered in the affirmative by good authority, would it not be wisdom on our part to say nothing more, as it only tends to injure the sale of honey? On page 643 is the following: "Educate! Educate! is the watch word. Let all think these things over and be wise."

Thomas Gorsuch.⊙
Gorsuch, Pa., Nov. 18, 1884.

Answer.—Prof. Cook tells us that the sweet liquid gathered by our bees, which is ejected by the plant-louse, is not usually bad for bees or man; that much of it makes good honey; but that ejected by the bark-louse is "vile stuff," not considered safe upon which to winter bees, and being disagreeable to the taste. If it is sold to unsuspecting honey-lovers, it will tend to disgust them with bee-keepers and their products, thus working us all a great injury. We must treat the consumer as we would be treated, or he will soon treat us to indifference and consequent failure. It seems that these secretions of the bark-louse, occurring in sufficient quantities and at the right time to attract the bees to it so as to mix it in with our surplus honey, only happens very rarely in any given locality; and when the bees do mix it, I know of no way but to remove the surplus receptacles till such secretion ceases. It happens so rarely that I have never heard of it till this season, and we here have not experienced it. Regarding "educating" the people to eat honey, I look at it in this manner: Honey is a luxury only, and always will be at any price at which we can afford to produce it. All luxuries should have their presence well advertised by keeping them always in sight, and otherwise urging their sale; but as regards "educating" the people as to the taste and nature of the commodity, is it not a little too old for that?

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a. m., Dec. 1, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. . Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. Burnett, 161 South Water St.

NEW YORK.

HONEY.—The market is well stocked with honey which is in good demand at the following prices: Fancy white comb in 1-lb. sections, 18@20c.; the same in 2-lb sections, 16@18c.; fair to good white comb in 1 and 2-lb. sections, 14@16c.; fancy buckwheat comb in 1-lb. sections, 12@13c.; same in 2-lb. sections, 11@11½c.; ordinary buckwheat comb in 2-lb. sections, 9@10c. Extracted, white clover in kegs or small barrels, 6½@8c.

BEESWAX.—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

CINCINNATI.

HONEY.—There is an unsatisfactory demand for extracted honey from manufacturers, while there is a fair inquiry for small packages of clover honey such as dime, ½-lb., 1-lb., and 2-lb. jars, from the retail trade. Prices are low as arrivals exceed the demand. Extracted honey brings 5@9c. on arrival; choice white comb honey is in fair demand and sells best in 1-lb. sections. It brings 15@16c. in the jobbing way. We have several small lots of dark comb honey from parties in Illinois, and offered it as low as 10 and 11 cents per lb, without finding a buyer. Dealers most certainly mislead producers by quoting buckwheat and poplar comb honey, if they are not more successful than we are in disposing of the same.

BEESWAX.—The demand is slow and arrivals are few. Good yellow brings 26@27c. on arrival.

C. F. Muth, Freeman & Central Ave.

SAN FRANCISCO.

HONEY.—A moderate trade is doing, mainly in best qualities. There are liberal supplies of extracted and common comb. In a wholesale way choice extracted is not readily salable over 4¼c., buyers being privileged to take a single case at 5c. There is some dark extracted on market for which 2½c. would be a full figure to realize. A vessel sailed for Liverpool with 105 barrels and 443 cases. White to extra white comb, 9@10c.; dark to good, 6@8c. Extracted, choice to extra white, 4@5c.; dark and candied, 2½@3½c.

BEESWAX.—Wholesale, 24@27c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY — Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY.—The market is quiet and unchanged, with good demand and liberal receipts. Comb, ½-lb. sections, none in the market. They would bring 18c.; 1-lbs., 14@16c.; 2lbs., 13@14c. The above figures are for choice stock in regular shipping crates. Dark or large combs in rough crates sell slowly at 9 to 10c. Extracted, California, 6@7c.; white clover, 7@8c.; Southern, 5½@6c.

BEESWAX.—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

Blake & Ripley, 57 Chatham Street.

Premium for Club of 10 Subscribers.

The book for every farmer is the one entitled "Alleck's Farmer's and Planter's Record and Account Book," in which there is the most systematic, complete and convenient arrangement of headings for every Farm Account and memoranda of all important events which may occur in connection with his business. Every progressive farmer certainly desires to make a success of his occupation, and should adopt every possible means of bringing about that result. He, then, should have a correct knowledge of his entire business, which he can have only by keeping a correct account of every crop produced on his farm, the cost of production of all his live stock and an itemized account of all his expenses. Then at the close of the year, when he takes off his balance sheet, which is admirably arranged in the book above referred to, he will be able to see at a glance whether his farm does or does not pay.

This valuable book contains 166 pages, is nicely printed on writing paper, ruled and bound, and the price is $3.00. It can be sent by mail for 24 cents extra.

We can supply these books at the publisher's price, or will make a **present** of one copy for every club of TEN subscribers to the Weekly BEE JOURNAL for one year, with $20. Four subscribers to the Monthly will count the same as one for the Weekly.

Now is the time to get up Clubs. Who will work for a copy of this valuable book?

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Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy 5 cts.; per doz., 40 cts.; per hundred, $2.50. 500 will be sent postpaid for $10.00; or 1000 for $15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

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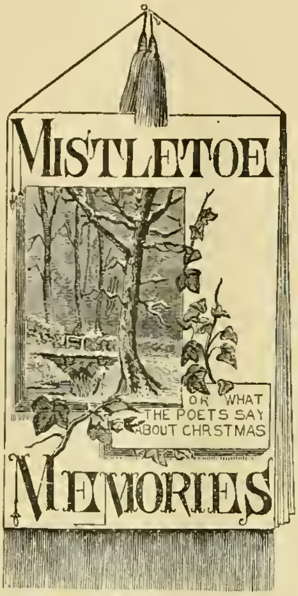
To every person who sends us one NEW subscription, (besides his own renewal), for one year, for the Weekly BEE JOURNAL, or 4 NEW Monthly subscribers, for a year, we will send as a present, by mail, postpaid, a copy of "Mistletoe Memories, or What the Poets say about Christmas."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Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

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Langstroth's Standard Work	4 00..	3 75
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1 50	" Farmers' Review	w	3 20
1 00	" Herald, *Independent*	w	2 85
1 00	" Inter-Ocean, *Republican*	w	3 00
2 50	" " "	s-w	4 40
2 50	" Religio-Phil. Jour., *Spirit.*	w	4 10
2 00	" Skandinaven, *Swedish*	w	3 85
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4 00	" Harpers' Weekly, *Illus*	w	5 40
2 50	" Leslie's Sunday Mag	m	4 20
5 00	" North Amer. Review	m	6 30
2 00	" Phrenological Journal	m	3 75
2 00	" Rural New Yorker	w	3 85
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All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

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The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

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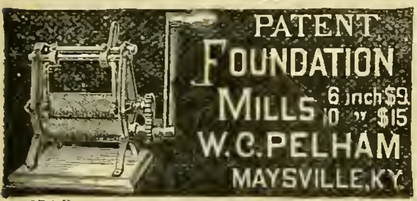
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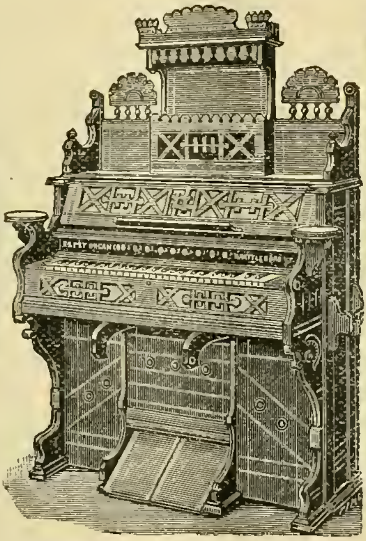

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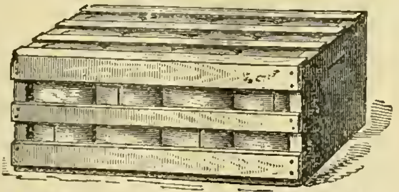

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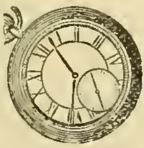

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ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., December 10, 1884. VOL. XX.—No. 50.

THE AMERICAN BEE JOURNAL

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925 WEST MADISON ST., CHICAGO, ILL.
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All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

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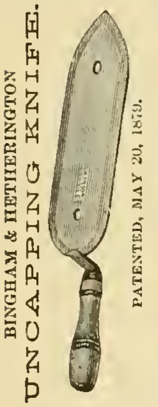
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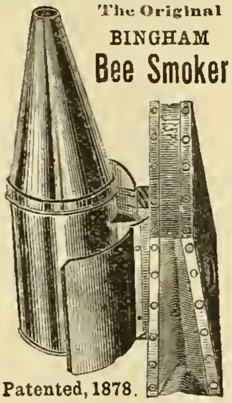

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Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., DECEMBER 10, 1884. No. 50.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

☞ This being No. 50, two numbers more will close the Volume of the Weekly BEE JOURNAL for 1884. Nearly all of the subscriptions will run out in a few days and we would respectfully request every reader and patron to sit down as soon as this article is read and send us the renewal of his or her subscription for 1885, and thus prevent the loss of a number and the consequent pleasure of the weekly feast it presents.

Phenol—Carbolic Acid.

Mr. A. W. Osburn, of Cuba, West Indies, asks us to reply in the BEE JOURNAL to the following queries:

1. What relation has crystallized carbolic-acid to phenol? We cannot get phenol here.

2. Is it your opinion that crystallized carbolic-acid, cut with alcohol, will cure foul brood after Cheshire's plan? We are trying it, but fear it is not going to do the business.

1. Phenol is a hydrocarbon produced in the distillation of coal-tar, or from the vapor of benzoic acid. Carbolic-acid is obtained from coal-tar, and when pure, is about the same thing as phenol—whether crystallized or in the liquid state.

2. We can see no reason why crystallized carbolic-acid, cut with alcohol, will not be as effectual in the cure of what is erroneously called "foul brood" as phenol. Our "opinion" (asked for by our correspondent) is, however, not worth a straw, because we have never tried it. We would invite Mr. Cheshire to give his "opinion" on the subject. As he has made it a study and experimented largely with the disease and the use of phenol for its eradication, his "opinion" is of more value than many thousands of those who have never experimented with it.

As there is much interest manifested by Americans on the above subject, we have published Mr. Cheshire's experiments and investigations in pamphlet form—32 pages—and will send it postpaid for 10 cents to any address.

The Charge of Adulteration.

In reference to the article on page 724, concerning Mr. Hunt's honey, and the result of the analysis as there published, Mr. Hunt sends us the following reply:

Centre Point,o+ Iowa.

On page 724 is an article on "Hunting Aduleration." Now, as I so far have been barred from replying to the accusations against my integrity as a bee-keeper, on account of my former reply being slightly flavored with "vituperation," I will again attempt a short answer, and will endeavor to be "as meek as Moses," and obey the injunction, "Love your enemies, and pray for those who despitefully use you," or words to that effect. I have now lain malice aside, and will *recite* the *facts*, and then leave it to the reader to determine whether I am guilty or not.

A former article from Mr. Von Dorn was headed, "On a Still Hunt." Now, I trust that Mr. Von Dorn will admit that their "still hunt" commenced about four years ago, with the game located in Omaha, and I being the "still hunter."

As a result of this "hunt," an antipathy sprang up which has since cropped out occasionally. I will pass many little incidents from that time up to last winter, when I attended the Nebraska State Bee-Keepers' Association. Everything there went smoothly until the question came up, "Where shall we get queens?" when a prominent queen-breeder was denounced as a fraud by one present. I remarked that I had transacted business with the party referred to, and had always found him a gentleman in every sense of the word, and felt safe in saying that he was not guilty of the charge preferred against him.

The next move was a "caution" by Mr. Von Dorn in the Nebraska *State Journal*. In that "caution" he stated that a sample of the honey would immediately be analyzed, and the result at once published. I would ask why Mr. Von Dorn did not keep good his word and have the result of *that* analysis published? To the reader it will be fully apparent why he did not, when I say that the result of the analysis was a statement from the Nebraska State Chemist, saying that he had analyzed the honey and found the same to be pure and all right. I would now ask, was not this as good evidence as that of Dr. Arno Behr, who analyzed the honey after it had been brought by Mr. Von Dorn from Omaha to Chicago. Saying nothing for or against either chemist, I think that the one statement of the quality of the honey only balances the other (providing that the last named honey was not tampered with in getting it from the can into the bottle, and then to Chicago); and, I think, before it is admitted that either "looks conclusive," that, perhaps, it would be well to have another reliable chemist analyze another sample from any one of the cans taken promiscuously from the lot which I sold to Mr. Tamblin, and then both sides abide by the result of such analysis. If he says that it is glucose, or any other thing but pure honey, then, Mr. Editor, say that that looks "conclusive," and award a crown to Mr. Von Dorn.

I have no "confession or apology" to offer, and a very small "argument." I have been thinking that if I were to engage in the glucose business, whether I would be foolish enough to put my own name and address on every can sold, when some other name would look just as well around a can of honey, and would go equally as far at a bank.

In conclusion I will say that I am in the bee-business to stay, and have no fears of being driven out by any member of the Nebraska State Bee-Keepers' Association.

F. H. HUNT.

Well, "when doctor's disagree who is to decide?" When two chemists make opposite decisions about an article, given to them for analysis, it is, to say the least, very confusing.

By the following letter from Mr. J. W. Sanders, of Le Grand, Iowa, it will be seen that a third sample is to be analyzed:

Le Grand,♁ Iowa, Dec. 4, 1884.

To-day, in Marshalltown, Iowa, I met with Mr. Tamblin, of Lincoln, Neb., who bought the honey in question from Mr. F. H. Hunt, of Iowa, and obtained from him, after being properly sealed and stamped by the American Express Company, a bottle of the disputed honey which Mr. Von Dorn claims is adulterated. The sample will immediately be forwarded to a chemist of one of our State institutions for analysis; and that analysis will be sent to the Editor of the BEE JOURNAL, for publication, as soon as obtained from the State chemist, who knows nothing in regard to the disputed honey. Mr. Tamblin is a gentleman, a scholar, and a man of business; and he desires to know by whom he has been wronged. As the chemist of the Nebraska State University analyzed a sample of that honey and pronounced it pure, and the chemist of the Chicago Sugar Refining Company pronounced it impure, he wants to know which is right. Mr. Tamblin says that the bottle of honey brought with him was taken promiscuously from the lot, and without any expectation of having the sample analyzed, but brought it along to show to disinterested parties. I, for one, must say that it has a fine appearance and good flavor. Mr. F. H. Hunt, of Centre Point, Linn County, Iowa, is an extensive bee-keeper, though comparatively a stranger to me, as I have met him but a few times; and he says that he is willing to abide the consequences of a fair test. We, as bee-keepers, are all interested in this affair, and want to have honor given to whom honor is due. J. W. SANDERS.

The BEE JOURNAL having published the charges of adulteration must, in justice to Mr. Hunt, give him a hearing, for it has no wish to deal out anything but "equal and exact justice" to all; in fact, we invited him to reply, as will be seen on page 724. We shall publish the result of the analysis by the Iowa chemist, and hope that will satisfy all concerned. As that is being done at the request of the merchant who bought the honey of Mr. Hunt, it would appear to be a *fair* undertaking, and we trust will result in an amicable settlement of the whole matter.

☞ More wild bees have been caught this season in the vicinity of Kingston, Green Lake county, Wis., than ever before.

☞ Small fruits and flies are now gone, the cooler weather excites the appetites for sweets, and if your honey crop is not sold, now is the time to dispose of it. The local market should be looked after first, and no honey sent to distant markets until the local demand is supplied. If there is no local market, make one; if you have never tried, you will be astonished at what can be accomplished by a little push.—*Exch.*

Moving Bees a Short Distance.

A correspondent in the *Kansas Bee-Keeper* gives the following as his experience in "moving bees a short distance:"

Moving bees a short distance is a square issue with nature. "Old fogies" will tell you that it can't be "did," because it's contrary to "nater." I have more practical experience in this matter of moving bees a short distance than I care to have. Last May I moved 50 colonies two or three hundred feet, without any perceptible loss of bees. They were moved near my office and honey storerooms. Well, last summer convinced me that they were too close to the public road, and while I thought that there was no probability of them ever disturbing anybody while passing the road, some people were afraid of them, and this was enough. I determined to move them back out of all danger. I selected a day that was cool in the morning, but warm enough for the bees to fly in the afternoon. Early in the morning the hives were all closed, and borne between two men to their new positions. Of course, the new yard was staked off and made ready beforehand. The hives were all kept closed till late in the evening. Boards were placed in front of the hives, and the bees were not let out till quite late, under which circumstances bees are most likely to mark well their new location, and to this management I attribute my good success. But the next day was the most trying of all. The old yard was cleared of every thing, and changed as much as possible in appearance. Some smothered fires made of wet straw were kept going in the old yard, and changed about where most needed. Well, on the third day I had my bees carrying in "meal" and sweetened water as though nothing had happened. Of course a few straggling bees will go back and look over the old grounds for several days, but this amounts to nothing, as they know how to return home.

Timely Hints.

The Texas *Farm and Ranch* contains the following interesting items:

In selecting the site for your bees, have one where the ground slopes, so that rain will run off freely, and make the hives face south or east, never north.

To raise prices by individual effort, work your home market for all that it is worth, and ship as little as possible to the cities, so as to avoid a glut in the market.

Mr. R. Wilkins, of California, has obtained 100,000 pounds of honey from 1000 colonies of bees. S. T. Miller, of Los Angeles, took 40 tons from 270 colonies and increased them to 370.

See that your hives are high and dry, and not liable to have rains or floods wash in. Place a piece of board to enable any belated or tired bees to crawl up into the entrances, in case they may miss the alighting board on their return from a fly-out.

Two bee-keepers living in the same locality, both using the same hive (Langstroth) and having the same facilities and advantages, report as follows: A doubled the number of his colonies and took an average of 100 pounds of honey from each. B about doubled his colonies, but did not get ten pounds of honey per hive. The difference was the result of management, care and attention.

Honey for Home Use.

The Indiana *Farmer* remarks thus upon the keeping of bees on farms, for the purpose of producing honey for the use of the farmer's family:

Aside from the hopes for any pecuniary gain, there is a great inducement for the keeping of at least a few colonies of bees. In these times of adulterated sweets, about the only resort is to buy directly from our neighbor or produce our own. Honey is one of the most delicious sweets producible, and can be produced with as little expense and labor as anything, especially so in a small way. People who make a specialty of poultry-raising, bee-keeping, etc., give all the time possible which they think will pay one penny more; yet honey may be produced as chickens are, for home use, with but very little care. The perfectly straight combs sell at a better price but do not affect the flavor of the honey. A partially filled section will bring only half price in the market, but it is just the same honey as fills the section without an empty cell; and with the knowledge of the present day, we are enabled to secure more honey from three or four colonies than our fathers obtained from three times the number.

☞ The Texas *Farm and Ranch* remarks thus concerning the Cheshire Foul Brood Cure:

I want particularly to call the attention of my bee-keeping readers to an article in the AMERICAN BEE JOURNAL for October 8, 1884, on "Foul Brood, its Propagation and Cure." It is a paper read before the International Congress of Bee-Keepers held in London a few weeks ago, by Frank Cheshire. It is exhaustive, and Mr. Cheshire claims that his cure is absolutely sure. Mr. Newman, the Editor of the AMERICAN BEE JOURNAL, has done the apiarists of America a considerable favor by publishing it, and it has been intimated to me by that gentleman that eminent United States bee-keepers are going to give Mr. Cheshire's cure a thorough test. With this essay in, and the anticipation of the results of these tests and these discussions, the BEE JOURNAL becomes absolutely necessary to bee-keepers; at least it is not safe, not wise to be without it.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

CORRESPONDENCE

For the American Bee Journal.

The Hibernation Theory, etc.

JAMES HEDDON.

I fail to see anything in it yet. I have, I think, had a greater experience and observation in this line than Mr. Clarke. For all this I might be mistaken while he might be correct. It does seem, however, as though I ought to get clear upon the subject, with so clear a writer to expound and explain. I find several weak points in his long essay on page 758, which I cannot let pass. I think that the incorrectness of these points destroys his whole theory.

Mr. Clarke asks for the admission that bees *generally* do well in trees during winter. This no one can admit and yet tell the truth. So far as my experience and observation go, they usually do worse in trees than in all sorts of hives. Many times they go below the entrance hole instead of above it; and one old bee-hunter has "spun" a theory that all fly-holes should be at the top of hives, for he has found that all those colonies in trees having the fly-holes at the top of the brood-nest, are much the best and longest lived. Many are the instances cited, and some of which I have seen, where the old cracked, split hives with tops all open, or Langstroth hives where the empty surplus boxes were left on, contained the only healthy colonies in the spring. If Mr. Clarke's ideas in favor of lower and against upward ventilation were correct, there would, at this day, be no such evenly balanced bee-keeping armies clamoring for both. That ground has been worked over, both by theory and experiment.

I find in connection with Mr. C.'s hibernation theory, that the hive is to be of such size and so arranged that the bees can regulate the temperature at all times. Now, just imagine the changes of temperature given us by nature, and a cluster of bees regulating the temperature within their walls against these outer changes and hibernating at the same time. Mr. C. quotes my bees which consumed so little, as hibernating. Well, they were very quiet, and so he claims them as within his hibernation theory. Now, I know that I fixed the temperature within their hives, and not they; and I further know that if they had been put out-of-doors upon just such a stand as Mr. C. describes, just as soon as the temperature sank outside, a buzzing would have been heard within, and that would not have been recognized, even by Mr. Clarke, as hibernation. Mr. Clarke's ideas of bees hibernating and controlling the temperature, "fanning" the cold air out and gases down, etc., at the same time, puts me in mind of Widow Bedott's recipe for a good night's rest, by just taking some of her herb tea every fifteen minutes, all night.

Mr. Clarke wants to know if any one can tell why bees do not need as pure air as a human being. If I believed his theory, I could say, because they hibernate. There are other reasons, no doubt; what they are I do not know, but I do know that I have seen bees come through the winter in a No. 1 condition, or at least with no signs of diarrhœa, where they had been subjected to the most abominable impure atmosphere. I have also seen them have the disease radically with the best of ventilation.

One might as well ascribe the cause of the cholera in Paris to carbonic-acid gas, as the bee-diarrhœa to the same source; when we analyze the excreta of these diseased intestines, we do not find gases, we find pollen. The theory that healthy bees which have been protected in a repository have been made tender, and thus are more likely to dwindle in the spring, is, in my judgment, false. It is based on the principle of good care making the bee tender, and then it cannot stand the cold winds of spring. While that is a true theory, in the light of the lifetime of a species, it is not true regarding the individual bee or colony. If it is, why does Mr. Clarke put this outer box over his out-door hibernating colony? Will it not make them tender, and cause them to dwindle in the spring? Let it be recorded that I call "spring dwindling" the result of a physical weakness brought about by the food diseasing the intestines in a limited degree, not enough to show in the hive, as the bees were able to hold the fœces till they could fly and void it where it would not be seen. Where bees do not speck the snow upon their first flight, or if so, only slightly and light-colored, there no spring dwindling will occur.

Spring dwindling is bee-diarrhœa in disguise. When we learn the cause and prevention of this disease, we shall also learn that a good cellar is the cheapest and best place in which to winter bees. Mr. Clarke's theory of the falling of carbonic gas, which is, I presume, the author of the theory of the lower air-shaft, is correctly shown as an error, by Mr. Corneil on page 756. Now, of what value is the shaft if Mr. Corneil's theory is correct, which I had previously learned it to be? Will the air-shaft stand when its uses fail? Does not Mr. Clarke suspect that his hive-stand is awkward and impractical for the use of the specialist? Does he not see that its expense is greater than the enduring and otherwise useful cellar? I cannot see wherein Mr. C. differs from the rest of us, only that he now calls hibernating what, last March, I called a sort of semi-hibernating condition (we hardly disagree upon the word to describe what we both agree to), and that I place this quietude as an effect of bee-diarrhœa preventives, and he, as the prevention itself.

It is certainly interesting to witness the masterly skill which our fellow bee-keeper displays in making the truthful statements of some and the erroneous assertions of others, seem to prove the most absurd claims which have yet been offered as the cause of our winter losses.

CONTINUOUS PASSAGE-WAYS.

On page 761, Dr. Tinker gives us a lot of assertions which I doubt if there is one-tenth part of the readers who can see any reason in. We want the reason why bees will not glue the sections together if no bee-spaces are allowed. Also, how it is managed to dispatch work while placing cases on top of each other, and not crush any bees. Yes, I did at one time think that these continuous passage-ways might have some advantages, but my experiments relieved my mind from the least doubt. When I asked the Chicago Convention how many believed in the continuous-passage-way system, I could not get one affirmation. I did not think that I was so far "off," but I wanted to be sure. I feel sure that continuous passage-ways do not tend to the building of straight combs; and further, I am quite sure that no race of yellow bees are the fine, straight comb builders that are the brown Germans.

During the past year I made careful experiments upon this very point, and I wish that the Doctor could hear my students talk about it. If I am enthusiastic on this point, the students are "cranky." Come, Doctor, give us the reason why bees violate the old rule laid down by Father Langstroth, that "Bees glue up all spaces too small for them to pass through."

Dowagiac, Mich.

Read before the Maine Convention.

Progress in Bee-Culture.

E. P. CHURCHILL.

I am always interested in anything pertaining to bee-keeping, and ever ready to contribute my mite in the way of promoting our noble cause. As we discuss the different modes of procedure in caring for our bees, let us do so with kind and unselfish motives. I am aware that I shall call out some criticism, but if we all thought alike where would be our thousand improvements of to-day? Who would have believed before comb foundation was tried that such a wonderful result would have followed? But we may go still farther back to the movable frame. If then, any one had told us that he could take a hive all apart and move the bees all about on frames, could discover any defect, and could change frames of comb from hive to hive, I ask, what would he have met? It would have been looked upon with as much doubt as the invention of the mowing machine encountered; but all these ideas have proved to be actual facts. And the question arises, have we reached the upper step of improvement and invention? I feel safe in saying that we have not.

There was at one time a great hindrance to our progress, and that was the different patents. Although we owe our Father Langstroth a score of thanks for his labor and for his patent, yet it is plain that a few patents were spread over the country which were a hindrance to progressive bee-culture. But happily nearly all of these have gone out of use. How absurd to think of success with a hive without division-boards; with the whole upper story and cover solid; with closed top-bars nearly their whole length, and frames fitting close to stays at their sides, to be ever fastened by the bees, proving, when removed, to be regular bee and queen killers! But says one, "I use such hives and obtain honey." So you may, my friend, and you can get it by using a box-hive or a barrel, or almost anything; and so we can cut our grass with a hand scythe, but how much easier and faster is hay obtained with the mower! Often I have heard the let-alone-plan advised, but after seeing what can be done with correct management, some will venture to try their hands at this.

I call to mind one particular case. I was transferring a colony from a box-hive when a neighbor called and stated that he had a wonderful colony of bees which he had just bought for the small sum of ten dollars, in the old Kidder hive. I asked how many frames there were; he did not know, but guessed it was full, at any rate, it was a big hive, and the party of whom he bought stated that the colony did wonders during the previous season. He thought it was all folly to go to the expense of my arrangement, but the sequel showed him his mistake. While the transferred bees made a splendid return in surplus honey and swarms, his did nothing. I had occasion to visit a party with the improved arrangement, and while there this old neighbor came, too, and looking rather "down in the mouth," asked me to go and see if I could discover the cause of his bees acting as they did. He had just removed them from the cellar, and they appeared to be weak; he also said that they acted strangely during all the previous summer. They would dart around and act as if dissatisfied with their home. I suggested that they might be troubled with moths. "Can you not go and see them?" said he. Have you not opened them? I asked. "Oh no, they would sting me to death." I was in a hurry; however, I went over, and after digging and prying a long time I succeeded in removing the old honey-board, when about as many worms as bees appeared to view. The queen tried hard to locate and start brood in several places in that very large hive, but the moths had driven them every time, and they were reduced to about a pint of bees. I knew, of course, that he could do nothing for them, and the shortest cut seemed to be to fit the hive so as to take the Langstroth frame, which was done, and single division-boards were put in. With care I got comb enough from the old hive to fill two of these frames. They were packed with chaff and cloth, paper and chaff being put over them. I directed him how to manage them, and to his surprise that little nucleus gave him two swarms and a good amount of surplus honey. He now handles his bees and knows just their condition at all times, and says that "guess work" cannot be depended upon. I give this one case to illustrate the condition of thousands.

It is a positive fact that no occupation will be successful unless properly attended to in all its minor points, and bee-keeping is no exception. Unless one loves the bees and intends to study them and devote some time and expense on them, he may as well give them a severe letting alone; but on the other hand, if he will only make his bees a study, as he does all his other work, he will find much amusement and some profit in it.

At the present time there is great diversity of opinion as to what strains of bees are preferable. One says: "If we want bees to sell, we need the pure Italians; but if for business, the hybrids are just as good; while another says that he wants the long, leather-colored Italians. I thought that an Italian was yellow at any rate, if pure; because we are told that the three yellow bands are a test of purity. Still, the best imported queens are sometimes dark; in fact, I do not believe that all queens from good colonies are perfect any more than that the progeny of other colonies of any kind will be blessed with perfect qualities, every time. I do not believe that we can produce queens whose offspring will be smart workers, etc., if we breed and mate queens from the same colony. And this is my reason for favoring hybrids, or at least one reason. It is a fact that we can do double the amount of extracting from hybrids (or black bees) that we can from Italians, and they are not quite so fond of their younger brothers and sisters, so they will leave the brood-nests and take to the sections a little freer than the Italians. But when we come to the manipulation of the hives, the Italians are far preferable. One will notice this very readily if he has occasion to extract from a variety. He will see also how much more work it is to get the Italians off the combs; besides, he will see hundreds of Italians scattered all about the hive, while with the others, nearly all will be inside. I do not speak of this to condemn the Italians, for I like their gentleness very much, but I intend to keep on the right side of my bees, or in other words, I intend to be master at the start, the same as I would with a horse or any creature which possesses a cross disposition. I do earnestly say, do not drop the Italians, but keep the best, and guard against in-and-in breeding as far as is within your power, and I believe perfection will be reached in time.

I think that the hive which we use has much to do with the disposition of bees. Let us begin on a hive where we cannot pry the case from the frames, and see how the bees will become aroused by the time we lift up a few frames which are adhering to the case which we are lifting. Robbers "smell the rat," and not a few are calling to seek what they may devour, and perhaps a queen is killed, or a valuable comb or two smashed. By that time the bee-keeper says: "I do not want any more chaff-hives." Now, my idea is, a chaff-hive every time. I believe it is of much account to pack the cover with some coarse material, as hay or chaff, as a shade, and also to keep it warmer in winter; and again, to press down the enameled cloth or quilt which may be over the upper story.

Let the hive be what it may, I prefer one whose frames are level with the top of the hive, so that in removing cases we can press a knife or chisel directly between them and the frames. I want the hive so constructed that when the division-boards are in place, there will be no possible exit for the bees, aside from the entrance, of course

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For the American Bee Journal.

"The Apicultural Outlook."

R. J. KENDALL.

On page 756 Mr. Heddon gives us some good thoughts under the above heading, but there is one point in which I differ from him, and that is, the organization idea; which of us is right, I am glad to say, is in a fair way of being tested. For some reasons I would like Mr. Heddon to be right, and on the other hand I would like to be right myself, for other reasons. But let us see. Mr. Heddon, like me, deplores the unsatisfactory condition of the honey market, but adds (probably alluding to my idea that organization would kill the adulteration and better the state of things), "Allow me to predict that organization will not stop this condition of things." That is Mr. Heddon's opinion. Now, when Mr. Heddon speaks on matters relative to the management of bees, I stand silent and do not presume to reply, yet on this subject the opinion of a beginner may be equally as sound as Mr. Heddon's. This, I presume, Mr. Heddon will admit—with slight reservation any way.

Mr. Heddon probably is aware by this time, from his perusal of the *British Bee Journal*, that that paper has been almost continually slapping, directly or indirectly, at American honey, and giving currency to the idea that American honey, as a class of honey, is usually adulterated; in other words, they have the glucose problem over there, more or less; the idea is out that American honey is adulterated with glucose. Whether this is true or not, matters not for the purpose of my argument.

How have the Britishers met the problem? They have organized. A honey company called "The British Honey Company" is just formed, the advertisement, brand or label (The British Isles) are published in the last issues of the above-named bee-paper. The label is a very taking one, and I predict that it will be very popular, and more, in my opinion it is the hardest hit at and will do more to keep American honey out of the market than any thing that the Britishers have done heretofore. See if it does not. I was born in England, and I know what I am saying—or I think I do.

If Mr. Heddon is right, then this organization of British bee-keepers will affect the sales of American honey (pure or adulterated) very little; if I am right, it will cut them down. Let the event settle it. I know that England cannot produce as much honey as she uses, but whereas the English have been using much honey produced here, they will now get cargoes from Australia and New Zealand, and, perhaps, from Canada, or from some British colony.

This is what the "sharp Alec's" in the shape of American adulterators have done for us. For instance, take myself; I was very seriously contemplating sending my honey to England—honey which I will warrant and swear to be pure honey without the least shadow of adulteration near it; but now I shall wait, and like Rip Van Winkle, when he was asked what he would now do if his wife tumbled into the river, he replied: "Stop and think about it awhile." I believe it would work the same here. Mr. Heddon does not give us any reasons why he makes his prediction, and I only can infer that they are because of his ideas on specialty, and that we have had altogether too much outcry as to adulteration.

Now, I believe in Mr. Heddon's ideas on making the business thoroughly a specialty, and heartily concur in his remarks as to the mistake made by so many supply dealers in trying to induce everybody and his wife to go into the business; but Mr. Heddon must remember that the adulteration cry is not made so much by bee-papers as it is by the thousands of outside periodicals which report cases.

If bee-papers, by talking about adulteration, cause their readers and honey-producers to adulterate by giving them the wrinkle, then, Mr. Heddon, we are a bad lot—and no mistake. No, it is not the *honey-producers* who do the adulterating, it is the middlemen and merchants who buy honey in bulk from the apiarists and then bottle and can it.

Why, a friend of mine who was employed in one of these very houses, and who did not know a queen from a drone, told me how it was done, and gave me the proportions of honey to glucose, etc.; if I remember rightly, it was about 30 per cent. of honey. Yet this same stuff was and is sold as pure honey. It is these fellows that we have to fight, and we have to fight them not around our own homes in the country so much as in cities; and in the cities the people do not know who Heddon or Doolittle is, and if they did, Heddon and Doolittle could not begin to supply those who want honey, so their private labels are lost in the crowd. The fact is, honest though every one of us may be, we are too isolated to be felt. Let us unite, have a common label, organize, and then we can strike effectively at those who are injuring us and taking the bread out of our mouths.

Personally I am not hurt yet, and more, I do not propose to be; but I will say this: If one thing more than another would make me give up producing honey, it would be just this refusal or lack of "git up" on the part of bee-keepers to take advantage of one of the first lessons their colonies teach them—unity of purpose for the common benefit—a lesson which every trades' union in the land emphasizes, and a lesson which is one of the first taught us in our childhood by the story of the Roman father and his sons and the example of the bundle of rods.

In Yorkshire where I was born, certain judicious men were described as being men "who save through the vent hole, but let their money go out by the bung hole"—and this is a very expressive way of putting the policy which we bee-keepers are now carrying out. We strive hard and rack our brains to get in an extra pound of honey, but when we let the big, city honey-houses manipulate and retail it, we are surely letting our money go out at the bung hole of our honey barrel with a vengeance. They will soon not be satisfied with the "bung hole," but will knock in the barrel head itself.

Mr. Heddon may term this a "lament" if he desires—I call it a word in season. "Fore warned should be fore armed," and I say to you, fellow bee-keepers, you must move in this matter, your vital interests demand it, and unless you do, you will regret it. "Now is the accepted time, and now is the day of salvation."

Austin,⊙ Texas.

Country Gentleman.

Timely Hints for the Apiary.

J. SINGLETON.

Winter is a time of comparative leisure to the bee-keeper as well as to the farmer, and should be improved by both in laying plans for another campaign when the season opens. The question of primary importance at the present season is: In what shape shall I have my honey crop put up, in order to realize the greatest returns from it? Those who have had several years' experience in the improved manner of bee-keeping, and have made a business of it, will by this time, no doubt, have solved the question for themselves; but to a majority of those who keep bees merely as a secondary matter, and who have but few colonies, it is still an open question. Looking over the files of the different bee-papers, we find about as many advocates for producing comb honey as we do for extracted, as a matter of profit. For a few colonies, no doubt, in my mind, comb honey will be as profitable, considering the less time and attention needed to care for the crop and the bees during the time of gathering; but for an apiary of 75 to 200 colonies or more, if one has abundant help, I consider that extracted honey will bring the greatest returns.

Now is the time for each apiarist to decide for himself, taking into consideration local variations in market. In some parts little extracted honey can be sold, and that at a low figure. In such a case, comb honey will, of course, be found the most profitable. Every honey-producer should cultivate his home market, and by supplying only *pure* honey, put up in attractive, clean tin pails or glass jars with labels, on which is printed the name of the apiarist as a guaranty of its purity, a fair local trade can usually be worked up without paying any profits to middlemen, or loss in transit and storage. I have usually had no difficulty in selling all my honey within a radius of a few miles of home, long before the next year's crop came in.

If the decision be in favor of producing comb honey, see to it that there is enough wide frames for holding the sections, giving room for at least 100 or 150 pounds per colony, as it is better to have more frames on hand than we expect to need; it often saves a great deal of trouble hunting up and emptying frames of sections not quite completed, from other colonies. In producing comb honey the question arises as to the size of sections, whether the ½-pounds, 1-pounds or 2-pounds. No doubt a greater weight of honey will be stored, under the same circumstances, in the large sections than in the small ones; but in most instances the large ones can only be sold at a reduction of several cents per pound, while the smaller ones are always salable, and command the highest price.

If comb honey is to be the object, a full supply of wide frames and sections should be on hand in good time, also foundation for starters, which I prefer to use almost as large as the sections, within ¼ inch of sides and bottoms. If the foundation is made thin, 10 or 12 feet to a pound, the bees will work it out so there will be no "fish-bone" in the honey, and no difference can be perceived between that and comb made altogether by the bees, while the use of full-sized pieces of foundation will insure straight combs and facilitate the work of the bees, inducing them to occupy the sections more readily than the small bits used some years ago.

If extracted honey is to be produced, have on hand a full supply of clean frames with good straight combs or foundation ready for immediate use when the season opens. Often it is not convenient in the busy season to extract as quickly as combs are taken off the hives, and a good supply of empty combs in reserve, or frames and foundation is very convenient, as the full combs can be put away for "a more convenient season," and good straight combs evenly drawn out are a "handy thing to have a good stock of" when well secured from moths and other depredators. Have ready, also, a good extractor of right size to fit the frames in use in the apiary. Also have an uncapping knife and waxed barrels, or better still, tin cans or pails for storing and retailing the honey when it is obtained. It is not wise to wait until a thing is actually needed before obtaining it, as time and money are often lost in the vexatious delays of transportation, etc.

It is conceded by most who have tried it, that from one third to one-half more weight of honey can be obtained by extracting than in the form of comb honey; and in time, those who deal honestly with their customers, and supply only the pure product of the flowers, in good and attractive shape, with the guaranty of their own name and location attached, will build up a business in that way, which, I think, will overcome the prejudice of customers, and establish extracted honey on a par with comb honey as to price.

Cuyahoga, ♂ O.

For the American Bee Journal.

Making Cushions.

WARREN PEIRCE.

The article in a late number of the Bee Journal by G. M. Doolittle, on "Preparing bees for winter," was read with much interest, and his directions for preparing a winter feed were marked for future use. If in return I can save him or any other apiarist some extra labor in making sacks for cushions like those he describes first, I shall be glad to do so.

Instead of using the long strip 72 by 4½ inches, and sewing the eight seams to set it together, just make a plain sack as described in the second place, only have it 4 inches larger each way than required when filled. Now take hold of the cloth each side of the corner, equally distant from the edges and fold the corner crosswise of the sack and stitch across far enough from the corner so the seam will be just 4 inches long. Fold and stitch each corner in this manner, and the same result is accomplished with only half the sewing.

Garrettsville, ♂ O.

Rural New Yorker.

Reversible Frames.

PROF. A. J COOK.

For some years a few of our most successful bee-keepers have been praising reversible frames. Mr. O. J. Hetherington, one of our most skillful Michigan bee-keepers, told me, some years ago, that the old style of the Quinby hive—one of the Huber style of hives—was superior on this very ground, that it permitted turning the frame upside down at will. Our people are very conservative, and it often takes years to introduce even a good feature in our practice; so, while many whispers of the value of the reversible frame have been heard, these, until within a year, have met for the most part, deaf ears. During the past year this subject has come prominently before the bee-keeping public, and reversible frames have been tried by a large number of our most intelligent bee-keepers, who, in nearly every case, have only words of praise for the arrangement.

The advantages secured by reversible frames are these: 1. The combs are fastened to all four sides of the frame, instead of just to the top-bar and the upper part of the end-bars, as is generally the case. Combs thus fastened are firmly held, and will never fall out, no matter how well loaded with honey, while being handled. Such thorough fastening is also very desirable in case the bees are to be shipped. Nothing can be more disastrous to bees which are being transported from one region to another, than to have a comb full of honey break out of the frame. Of course, if we use wired foundation, the above point in favor of reversible frame has no force; combs on wires never fall out of the frames. But, as desirable and excellent as wired combs are, comparatively few apiarists are yet using them. To such, reversible frames, enabling the bee-keeper to force the bees to form a firm attachment of the comb to the frame, would be a valuable acquisition.

2. By the use of reversible frames, bees can be induced to work in the surplus chamber, when otherwise this seems impossible, as every bee-keeper knows that the bees always place some honey (often very little) above the brood. From this rim of honey the brood, by the time the honey harvest opens, is built clear to the bottom-bar of the frame. If at this time the frames are turned bottom upward, there will be no honey above the brood, and the bees, true to their instinct, will instantly rush to the sections and give us the delectable white clover and basswood honey in the surplus receptacles—just where it is desired.

To use these frames, we have only to take them out of the hive and turn them bottom side up. This will be done when we wish our combs firmly attached to the bottom-bars; also at the beginning of the honey harvest, when we wish to send the bees *en masse* into the surplus chamber, that our beautiful white sections may be speedily filled with more beautiful and whiter honey.

There are three ways of making these reversible frames: The frames may be made to stand up on the bottom-board, like the old Quinby frame and the Bingham frame, or they may have a projection from the center of the end-bar, resting on an iron support fastened to the side of the hive, midway from top to bottom; or, a strap of iron three-fourths of an inch longer than one-half the length of the end-bar, and of the same size, may have one end screwed to the center of the end-bar of the frame, and be bent over at right angles one-half inch from the other end. A hole is made through the iron in the middle just below the angle, large enough to receive a small wire nail. Now, by simply removing this nail and turning this iron, the supports may be changed from what was the top-bar to the bottom-bar, and the frame reversed. The wire nail is pushed into a hole previously made in the ends of the top and bottom bars of the frame, and, of course, holds the iron securely so it cannot turn till the nail is removed. I have used all three styles with success.

Agricultural College, ♀ Mich.

For the American Bee Journal.

Western Michigan Convention.

The bee-keepers of Western Michigan met on Nov. 25, 1884, in Music Hall at Fremont, Mich. The President, Thos. M. Cobb, being absent, Mr. Balch, of Kalamazoo, presided over the meeting. The minutes of the last meeting, and the Treasurer's report being called for, they were read and accepted.

This being the annual meeting, the election of officers then took place, and resulted as follows: President, George E. Hilton, of Fremont, Mich.; Secretary, F. S. Covey, Coopersville, Mich.; Vice-Presidents: For Kent county, Thos. M. Cobb, Grand Rapids; Ottawa, Martin Pelow, Holland; Newaygo, A. M. Alton, Newaygo; Oceana, John Dolph, Hesperia; Muskegon, G. C. Young, Ravenna.

The meeting then assumed the social form, the most of the members relating their experiences and reporting their successes for the past year, which was usually good. The matter of sending delegates to the National Convention to be held at Detroit in 1885, was brought up, and the convention decided to send two, Mr. George E. Hilton and Mr. F. S. Covey.

The time for adjournment having arrived, Mr. Hilton invited as many as could, to meet at his house in the evening for a good time, and to look at his model apiary, which is indeed a fine sight. The convention then adjourned to meet on the first Tuesday in May, 1885, at Fremont, Mich.

F. S. Covey, *Sec.*
George E. Hilton, *Pres.*

Lewiston Journal.

Bee-Keeping in Maine.

X. Y. Z.

On a beautiful August day, when the goldenrods were just coming into bloom, and the bees were rolling the pellets of pollen upon their tibial extremities, and thrusting their tongues into every nectar laden chalice for the stored-up sweets of the orange-colored blossoms, it was my pleasure to enjoy a chat in the extensive apiary of Mr. J. B. Mason, of Mechanic Falls, who is one of the best informed bee-keepers in Maine. Mr. Mason has been long a close student of the economy of the hive and its occupants.

Moreover, Mr. Mason has had the advantage of wide observation among some of the most practical and scientific bee-keepers in New England, which, coupled with his diligent and close application of the principles of bee-keeping gleaned by reading the bee-literature of the country, and possessing withal quick intuitive perception, these combined with his many years of experience in handling bees, make him master of the business.

"The bee interest in Maine," says Mr. Mason, "has increased quite fast during the last decade. And this right in the face of discouraging seasons and consequent failure from short honey crops. The Western development of apiculture has been wonderful within the last fifteen years. Tons of honey are now yearly produced by single apiaries cared for by individuals who make this their only business, and who often realize a fortune from it."

"Maine caught the fever somewhat, soon after the introduction of the Italian bee into this country some twenty years ago. About that time Mr. Langstroth brought forth and perfected his frame hive which was a boon to bee-keepers, and opened up a new phase in the business, revealing new possibilities in the rearing and breeding of bees, which two decades of wonderful progress have failed to fathom or exhaust."

"All over the West and portions of the South, and in California, and laterally spreading into portions of New England, were men, and women, too, who made a specialty of rearing queen-bees and sending them to all parts of the country by mail. In warmer latitudes, with longer seasons, the new method of caring for and handling bees grew into a profitable business, and to many became a congenial pursuit. At this time Maine's bee-keepers were struggling along with their bees in box-hives, depending upon the brimstone pit at the close of the honey season for a supply of the sweets of the hive, thus 'killing the goose to obtain the golden egg.'"

"But the bee-keepers of Maine soon caught inspiration from the Western 'buzz,' and notwithstanding the drawback of short summers and long, hard winters, they have become so well schooled in the intricate and wonderful processes of bee-life, that to-day the business is one of considerable magnitude, and I cannot but think that the day is not far distant when Maine farmers will as constantly supply their tables with the pure sweets of the hive, as they now do from the golden product of the dairy."

For the American Bee Journal.

Causes of Loss in Winter.

S. J. YOUNGMAN.

I would say to the bee-keepers in the North, do not despair of yet solving the difficult problem of wintering bees, while such men as Messrs. Heddon, Clarke, and a host of others are so deeply interested, and are striving with each other, both by hard study and costly experiments, to see who shall be the first to say "Eureka." I would frankly say that I think Mr. Clarke's theory has but few friends, but all must admit that his plan has advantages for ventilating the hive. My observations have led me to believe that bees do not winter as well in trees as they do in hives; as I have had them die out in log-gums which were 8 feet in length, and at the same time do well in movable-frame hives. I have also cut trees, and have known others to, which contained combs with honey; but the bees had hibernated to such an extent that they had failed to awaken.

I think that Mr. Heddon made a true statement when he said: "This question of wintering is not one of cellars, ventilation, pieces of lath, sticks, quilts and cushions over the combs; what kills our bees is diarrhœa." I agree with Mr. Heddon this far; but what is the cause of this disease? I cannot believe that pollen is the first cause of this worst-of-all diseases which bees are heir to. I am convinced that bees having all the necessary conditions to winter well, do not breed as when ordinarily prepared for winter by the well informed bee-keepers of the present day; but anything which may threaten the welfare of the colony, whether a loss of numbers, a diseased condition, or anything which threatens the extinction of the colony, will cause it to commence brood-rearing at once; and if pollen is at hand, they will, of course, use it, and this will certainly aggravate the condition in which we find them when diarrhœa first makes its appearance.

I have seen bees affected with this disease at all times of the year, in fall, winter, spring, and in mid-summer; in the fall when flights were quite frequent and no brood-rearing going on at the time. On June 18, 1884, I received, at this place, a car-load of bees from Louisiana, which had been confined to their hives for over eight days, and upon having a chance for a fly, many of them showed unmistakable signs of bee-diarrhœa. This, of course, was not caused by brood-rearing.

Now, I find some locations which are nearly, if not quite, exempt from this disease, as it ordinarily makes its appearance in colonies of bees. I find that in dry, sandy locations where fall bloom is scanty and the honey sources are from raspberry, clover, basswood and purple fire-weed, there is no trouble of this nature; on the other hand, where there is an abundance of fall bloom, such as buckwheat, motherwort, corn and different varieties of wild asters, the trouble commences early, and many in such localities lose all the bees that they may have; whether they are on the summer stands, packed in chaff in double-walled hives, in cellars, or in clamps, the result is the same.

As far as Michigan is concerned, apiaries in the southern and middle parts seem to be more affected with this disease, or condition of things, than the northern part. Bees are kept successfully at Petoskey, which is as far north as I have known them to have been kept in this State. I know, personally, that there are wild bees as far north as Roscommon county, and that two of the most successful bee-keepers of Michigan live far north of Bay City, in the interior of the State, on an elevated location, the soil being of a sandy nature, and willow-herb, called by some purple fire-weed, and goldenrod being their chief sources of fall honey; and from whom one of our most prominent bee-keepers living in the southern part of the State, has twice purchased bees, after losing her own by diarrhœa. I refer to "Cyula Linswik," who smiles quite audibly at Mr. Clarke's long, winter nap, and Mr. Heddon's pollen idea; and well she may, as she has never met with any serious losses. Thanks to the plants which gives her a pure, healthy article of honey—"it cannot be excelled"—and her admirable method of packing and ventilating the hives.

I would say in conclusion that it will be utterly impossible to winter bees successfully in low, moist localities, unless the early honey is left in the hive, the extractors used with caution, and combs of white clover or basswood honey laid aside to be given back to the bees in early fall in place of the "vile stuff" which they sometimes gather; but perhaps the surest way of all is to extract all the honey in early fall and feed up with a good article of sugar syrup, and thus not run any chances of not having the necessary requirements for them to winter safely.

Cato,⊙ Mich., Dec. 1, 1884.

For the American Bee Journal.

Returning First-Swarms, etc.

FAYETTE LEE.

For me this is the hardest part of bee-keeping. I do it in three ways, viz: 1. Return the swarm after removing all queen-cells, then turn the hive half way around. 2. Hive the swarm in a new hive placed beside the old one, and in three days put the combs from the old hive into the new one. 3. Kill the old queen, and in eight days cut out all of the queen-cells except one. With second-swarms, this season, I waited till I heard the queens peep, when I would open the hive and cut out the queen-cells and let out one of the queens, so as to be sure that there were two queens in the hive at one time. In this way I had only two second-swarms out of 48 swarms. Sometimes the young queen will lead off a swarm, if the cells are all cut out; but if two young queens are free, there will be a fight, when one will be killed, and no swarm will be led off. This has been my experience. I want to make 80 section-cases to be placed on Langstroth hives, and I want to make the best kind. What is that kind?

Cokato,⊙ Minn., Nov. 30, 1884.

[Your question is very indefinite. Are the "cases" to be filled with one-pound sections or larger? Do you wish to use separators, or not? Do you want cases to use over the frames, or in the brood-chamber? You should particularize or the question cannot be answered satisfactorily.—ED.]

For the American Bee Journal.

Winter Queen-Rearing in Cuba, etc.

A. W. OSBURN.

As many have written me regarding the rearing of queens here in winter, and shipping them North in early spring, I take this way of answering, as it is quite impossible to give personal answers to each letter that I receive. In the first place, the thing is impossible; for after Oct. 15 there are no drones to speak of. There are a few, and it is barely possible that after Oct. 15 until Feb. 15, we might get one queen in 15 mated; but you see that it would never pay as a business.

Now, in relation to Cuban bee-keeping: What I know of it is, that the management of bees for surplus is so different from that in the North, that whether it shall finally prove a success or not, depends upon judicious management. As you know, the surplus season comes here in the winter; and although it does not freeze, the flowers bloom, and the bees gather honey. Yet it is winter; it is winter time, and it is winter with the bees. Although they are in a tropical climate, their nature is not materially changed. They kill off their drones, the queens lay sparingly, they seal up every crack in their hives, they are cross and hard to handle, and when disturbed are liable to ball their queen, and everything goes to show the close observer that they are preparing for a season of rest; if not to "hibernate," to suspend all, or nearly all operations until the next spring.

But the long, cold winter of the North does not come with the severity that it does in New York or Michigan; but instead, a temperate, cool, fall weather, during which there is plenty of honey to gather, yet the colonies are not strong like they would be in May or June, and, of course, the amount of honey cannot be gathered, as the days are short, and the nights are cool, thus making it hard to properly evaporate honey. All conditions seem to be unfavorable to great success, or to securing a large honey yield at a season of the year when, to my mind, nature had designed that the honey-bee should be asleep. Our surplus season is near at hand now, and were it the first of June, instead of December, large results could be expected, for the honey is here, but the workers are few, and the time of the year is against them.

For the first six or eight months that I was here, I was told, by the native bee-keepers, great stories about Cuban bee-keeping, and the honey resources at all times of the year; but I have not found their statements "to pan out" worth a cent. From July 1 to Nov. 1 we had four months of honey dearth, when the bees did not make a living. I will not say that the business will not be made a success finally, but I will say this: I know that there is much to learn about the winter management of bees, in order to make them profitable at this unseasonable time of the year. I will report further when I have had more experience. Our efforts during this winter will be to secure all the honey we can, instead of increase, as we were doing last winter.

Cuba, West Indies, Nov. 27, 1884.

Prairie Farmer.

A Familiar Talk About Bees.

MRS. L. HARRISON.

A sprightly, energetic, old lady called to me to have a talk about bees. She said: "My old man is so quare, he never wants to change, wants to do just as his father did. When we begun house-keeping, his father gave us a swarm of bees in a 'gum,' and said to me, now Liddy be sure and salt these bees on Washington's birthday, or they will do no good, and if Jesse should die, rap on the hive and tell the bees about it."

As the bees were given to me to "salt," I took an interest in them, and I wanted Jesse to get some patent hives. But he said, "father never spent one cent for his bees, except to buy a quarter's worth of brimstun in the fall, and I'm not going to, either. He melted the brimstun, and then dipped some dry sticks in it; then he dug a hole in the ground, made a fire with these sticks, and set a 'gum' over it. In a few minutes the bees had all dropped into the fire; he hefted all the gums, and all that he thought was too light to winter, he smothered. Mother strained the combs, and when she could not get any more honey, soaked them in water and made metheglin. At last she boiled the comb, and made wax, and always had a cake of it, to put with the taller, when she made dips. I tell you Liddy, the old way is the best; never had any one burnt up with the pesky kerosene in those good old days, and we had plenty of honey for our buckwheat cakes, with only 25 cents spent for brimstun."

One day Jesse was away and the bees swarmed, and I put them into a gum, that Jesse always said was too small—not high enough. It was a very large swarm, and the bees could not all get in; so I bored some holes in the top, and put on some starch boxes. When I was fixing the boxes, the hired man said, "Let me cut some holes in the ends of them, and tack pieces of glass over them, so you can look in and see what they are at." There was a splendid flow of honey just then, and the boxes were soon filled, and I removed them, and put a large glass dish in their place and covered it up dark and close. When it was filled, I showed it to Jesse, and told him I was going to take it to the fair. So I did, and it took the blue ribbon. I was so pleased that I staid around the honey exhibit, and I found other bee-keepers did too, like flies around a sugar barrel. A bee-keeper (who did not know I brought it) said, "That honey in the glass dish should not have drawn the premium; it looks pretty, but it is not in marketable shape." And then he pointed out to me little boxes that he called sections, and showed me how nicely they could be handled; also a Langstroth hive.

I was delighted, and spoke right out in meetin', "Jesse do come and see this hive." He looked at it leisurely and said, "What do you want me to see it for, our hives are good enough; you can bore all the holes you want to, and turn glass ware over them." Jesse is so sot, I knew it was no use to argue the matter further, and concluded to buy some hives and say nothing about them.

When the owner of the hive came around again, I asked him the price of his hive, and he handed me a printed list. I saw hives in the "flat," and they were cheaper than the other; I did not know what this meant, so I said. "Why are these flat hives the cheapest? O! you mean hives in the flat; they are the pieces of a hive all ready to nail together. When they are shipped more of them can be put into a car in this way, and more can be hauled in a wagon. I told him that I wanted to buy six hives all ready to put bees in, and could I have them the last of next May?" I did not want to ask Jesse to drive nails, and I told the man he need not be afraid he would not get his pay, because Jesse wouldn't buy the hives, for I was going to save the premium money that I got on my honey, and add the turkey money to it, and also what I get from poultry and eggs during the winter.

Peoria,⊙ Ill.

For the American Bee Journal.

Wax and Comb Foundation.

HOWARD U. ACKERMAN.

The increasing demand for wax, caused principally by the large quantity used annually in making comb foundation, has naturally increased the price of this useful commodity, and, of course, that of comb foundation as well, until the price of comb foundation has reached so high a figure that many bee keepers are debating whether they can afford to use it during the coming season.

There certainly is a point, beyond which the use of foundation will cease to be profitable to the average apiarist; but whether that price has yet been reached, can best be decided by bee-keepers whose experience covers a greater length of time than my own. I mean by that, the use of full sheets of comb foundation, both in the brood-chamber and sections, for we could not well dispense with the use of comb foundation for starters, at any price; although it would be so much more desirable to use full sheets, especially in the brood-chamber, for by no other means can we secure such nice, straight, all-worker combs.

I think that it has been demonstrated that practical American apiarists cannot produce wax in any great quantity, even at the price at which it is now selling. Of course they can produce some wax, which would otherwise go to waste, and in a year's time it amounts to thousands of pounds in the aggregate. But what I mean is, they cannot run an apiary exclusively for wax and make nearly so great a profit with wax at thirty-five cents per pound, as they can by running for honey and selling it at ten cents per pound. Am I not right?

Now, what should be done about this state of affairs? We must have comb foundation, and that, too, at a reasonable price, and, therefore, we must have wax which we confess we are unable to produce in sufficient quantities to meet the demand, even at the price which we all consider too high when we have to buy it. I think that the most reasonable thing to do is to look elsewhere, outside of our own country, for our future wax supply; for I am convinced that it can be produced in Europe at a much less cost than American bee-keepers can afford to produce it; and that we can import it at a much less cost than the present market price of wax.

If there is a duty on wax, I think the bee-keepers of this country should petition Congress to abolish that duty without delay.

I have often noticed that supply dealers announce in the bee-papers, that if the supply of wax was not equal to the demand, or if prices continued to advance, they would be compelled to import it. I do not know whether they have done so, but if they have, I should judge, not in sufficient quantities to affect the market here.

The value of the annual yield of honey in the whole empire of Russia is not far from $4,000,000, or about 18,000 tons. To this must be added nearly 5,000 tons of wax worth $2,000,000. This is about all consumed in Russia, the exports being very small.

Russia annually produces nearly 5 pounds of wax to every 18 pounds of honey. If American bee-keepers could do this, or even half as well, it is safe to say that we would have all the wax which we should require for comb foundation, or for other purposes, and yet have some to spare. It will also be seen that 5,000 tons of wax is valued at $2,000,000 (20 cents per pound), or from 5 to 10 cents less than the market value of wax here; and that 18,000 tons of honey is valued at $4,000,000, or a fraction over 11 cents per pound, and, as I suppose, this is comb honey. Who will doubt that Russian bee-keepers can produce both wax and honey at a less price than we can?

I should think that wax could be imported at a cost over the first price of not more than 5 or 6 cents, thus making the cost of it, delivered here, about 25 or 26 cents per pound, and, as it could be worked up into comb foundation for from 15 to 20 cents per pound, the foundation made from it could be sold from 40 to 50 cents per pound, a price at which every one could afford to buy in as large quantities as his necessities demanded. If it can be accomplished at the figures which I have given, it will be a boon to many bee-keepers.

North Indianapolis,⊙ Ind.

SELECTIONS FROM OUR LETTER BOX

Small Honey Crop.

Our honey crop was small, being only about two-thirds of the average. Our principal source was the poplar; while it lasted, which was for three weeks, all the strong colonies stored from 30 to 100 pounds of honey, which I extracted. I had 26 colonies in the spring, and increased them to 54. I give them no attention, owing to sickness in my family, and the death of my father and my wife. I obtained 1,000 pounds of honey, mostly extracted. J. A. P. FANCHER.

Fancher's Mills,⊙ Tenn.

A Poor Season.

We have had a poor season here in Northeastern Kansas. The weather was too cool most of the time for the secretion of honey. I have increased 15 colonies to 23, and have secured 150 pounds of surplus comb honey. New colonies were built up by a liberal use of comb foundation, and the surplus honey is mostly in an unfinished condition, not being capped over, and has a rank taste. The colonies have reared no brood since Sept. 1, and consequently are weak in bees, and none are very heavy with honey, but I think that they have enough to last until they are set out in the spring, when those which need honey will be fed. I shall put them into the cellar as soon as the weather turns cold.

L. C. CLARK.

Granada,♂ Kans., Nov. 25, 1884.

Is Dodder a Destructive Plant?

Let me sound "a note of warning" in regard to that plant called "dodder," which was illustrated on page 755. I found a description and cut of this plant in a book called "Rays from the Realms of Nature," by Rev. James Neil, M. A. The cut is very similar to the one given in the BEE JOURNAL, and after speaking of other parasitic plants, he describes dodder as follows: "Another deadly English parasite is the curious "*Cuscuta*" or "dodder." It appears in the form of long filaments which attach themselves by means of suckers, to the stems of certain plants, around which they twine in a tangled mesh. They are at times as terrible a visitation as a flight of locusts, destroying whole crops of lucern clover and flax." Now, I am anxious to have new honey-producing plants introduced, but I think that we should know all about them, both the good and the bad qualities. The article on page 755, speaks of it being destructive to alfalfa only, but the above quotation says that it is also destructive to clover and flax, two of our very important crops. Let us leave it in California, if we cannot push it into the Pacific; we do not want it any nearer to us.

F. D. MITCHEL.

Paris, Ont., Dec. 1, 1884.

Bee-Keeping in Texas.

As far as I can ascertain, bees have done very poorly here this season. They swarmed but little, and stored very little surplus honey. I have recently purchased 9 colonies, which I have been Italianizing. I have kept bees on a small scale for 20 years, in Maine, and I think that I shall now go into bee-culture quite extensively. Texas honey is very inferior compared with Maine honey. I do not think that one-half of the colonies have honey enough to winter on. I have my doubts about this section being very good for bees, but the people say that in some years much honey is produced, although the last two years have been very poor ones. Bee-keepers lose many bees in the winter; some say that the bees freeze, while others attribute it to other causes. Here they have winds from the north in the winter, which they call "Northers." These winds make it very chilly, and they come so suddenly, that such may be the cause of the loss of many colonies. I would like to hear from some practical bee-keeper in Texas, what care is given their bees in winter, etc.

C. M. DAVIS.

Denison City,♂ Texas, Dec. 2, 1884.

* * *

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Stuart, Iowa, at 10 a. m. on Saturday, Dec. 27, 1884. All who are interested are invited to attend.

M. E. DARBY, *Sec.*

* * *

☞ The Willamette Valley Bee-Keepers' Association will hold its second meeting at La Fayette, Oregon, on the third Tuesday in June, 1885. All who are interested are invited to attend.

E. J. HADLEY, *Sec.*
F. S. HARDING, *Pres.*

* * *

☞ There are a few general rules which beginners should adhere to closely in the handling of bees, first among which is in regard to the use of smoke. If they fail to do this, as many do, they should not grumble at the result. If in after time one prefers to take the chances of being stung, rather than to go to the bother of lighting up the smoker, he only chooses what he considers the least of two evils, trouble or pain.—*Exch.*

* * *

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

* * *

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly BEE JOURNAL for one year at $1.25 for the two.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Keeping Bees on Shares.

Will Mr. Heddon please give his opinion on taking bees on the shares, or on what condition bees are generally let? One man offered me 100 colonies, last spring, on the following conditions: I was to take the 100 colonies and buy 100 new hives complete for $4 each, for the swarms, and I was to receive half of the honey and half of the swarms; and in the fall he was to take the 100 colonies which he let me have in the spring, half of the honey, and half of the swarms, making the new hives cost me $8 each. I proposed to take his bees in this way: I was to take the 100 colonies in the spring on the same conditions as above, except that he was to furnish half of the hives and I the other half. T. W. Dougherty.

Princeton, Ill., Nov. 24, 1884.

Answer.—Perhaps I can do no better than to repeat what I wrote on this subject in last year's Bee Journal, and then Mr. D. can judge which of his two terms I consider the correct one: The "Bees on Shares" question, is one that I have studied considerably. In answering the above, I do so with a prejudice in favor of the laborer vs. the capitalist, a principle herein involved, though on ever so small a scale. Here are two facts:

1. Bees are to some considerable extent a risky property; their life and and the amount of their stores being an unknown quantity. One should have a larger per cent. of income from such property, by three or four fold, than from a good, safe real estate mortgage.

2. On the other hand, the laborer should have an average income in advance of the "going wages." All this can be realized from the manipulation of bees, provided the bees are in proper hives, in a good location, and the work done by a faithful and learned man, and directed by experience and tact.

I will lay down the following terms as those which seem to me the nearest to being just, and the best adapted to both parties:

The one owning the bees shall furnish the place to establish the apiary. He shall furnish all the fixtures in every respect. The laborer shall furnish himself, nothing more.

> "The laziest tramp can turn and mend,
> And be a man 'for a' that.'"

The capitalist furnishes bees, apiary, tools, new hives for increase, comb foundation for surplus and brood departments, in full sheets; sections, shipping crates and everything, including his riper experience (which, it is supposable, he possesses). He shall have the diction of the general plan of management, while the renter does all the work, and is dictator of the detail manipulation. The division shall be as follows: Each party shall have one-half of the surplus honey, and when it is sold, each one shall pay one-half of the cost of sections, shipping-crates and surplus comb foundation that is sold with that season's crop. The capitalist shall have diction over the whole crop, merely dividing the money for the same, unless the laborer give security for the payment of his half of the sections, foundation and crates, when the honey may be divided, and each sell his own as he chooses. The bees should be managed for securing the greatest amount of surplus possible, and discouraged from swarming, all that such management tends to do, but when they do swarm, they are to be hived and managed as are the old colonies. The increase belongs to the apiary, always; and any system that gives a share of the increase to the laborer, will defeat itself, and prove in the end damaging to both parties. The old system of half the honey and half the increase, and the lessee or laborer furnish everything, is illy adapted to modern apiculture, and would give the capitalist "the lion's share." Of course the surplus from the increase is divided equally, the same as that from the old colonies. All the reasons for settling on the above terms as the nearest just and best, all around, are too many for this department.

Convention Notices.

☞ The annual meeting of the Michigan State Bee-Keepers' Association will occur in Lansing, Mich., in the Senate Chamber of the State Capitol, Dec. 10 and 11, 1884, first session beginning at 10 a. m. on Dec. 10. This being the home of Prof. A. J. Cook, and the location of the State Agricultural College, it is expected that this will be the most interesting meeting ever held by this Society. A programme is being prepared, including several very important and interesting papers from Prof. Cook, T. J. Burrill, Dr. Beal, and R. L. Hewett, and several prominent apiarists from other States. A large delegation is expected from Canada. The question-box will be one of the important features. Come prepared to ask and answer questions. Reduced rates on all Michigan railroads, and at hotels in Lansing. The President and Secretary will be at the Hudson House. Notify me as soon as possible how many railroad certificates you will want, and over what road you will go, so I will have time to procure them. A cordial invitation is extended to all. Please come and bring your bee-keeping friends with you.

H. D. Cutting, *Sec.*

☞ The sixteenth annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 21, 22 and 23 of January, 1885. The executive committee are determined to maintain the high standing and enviable reputation which the Association has justly gained in the past, and at the coming convention they propose to outdo all former efforts. The meeting will surely be the largest and most interesting ever held in America. No bee-keeper can afford to stay at home. All are invited. All implements of the apiary sent to the Secretary, will be properly arrayed to compare favorably with others on exhibition, and will be disposed of or returned, as the owner directs. Reduced rates for board at hotels.

Geo. W. House, *Sec.*
L. C. Root, *Pres.*

☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.

W. B. Lawrence, *Sec.*

☞ The annual meeting of the Northeastern Kansas Bee-Keepers' Association will be held in the Court House at Hiawatha, Kans., on Friday, Dec. 12, 1884. An invitation is extended to every one interested in bee-culture.

L. C. Clark, *Sec.*

☞ The Hancock County, O., Bee-Keepers' Association meets in the Court House at Findlay, Ohio, at 10 a. m., on Saturday, Dec. 13, 1884.

Sam'l. H. Bolton, *Sec.*
P. A. Riegle, *Pres.*

☞ The regular annual meeting of the Indiana State Bee-Keepers' Association will be held on Thursday and Friday, Jan. 22 and 23, 1885. The meetings will be conducted in the rooms of the State Board of Agriculture, on the corner of Tennessee and Market Streets, in Indianapolis, Ind. It is proposed to make this the most important and interesting meeting of bee-keepers ever held in the State. An extensive programme, including all questions of importance to bee-keepers, is being prepared and will be soon sent out to bee-keepers throughout the State. Prominent apiarists from neighboring States have been invited to assist and presumably many of them will be in attendance during the meeting. These gatherings are of vast importance, especially to beginners, and all those at all interested in this important industry should make it a point to attend this meeting.

Frank L. Dougherty, *Sec.*

Local Convention Directory.

Time and place of Meeting.

Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

Dec. 13.—Hancock County, at Findlay, Ohio.
Samuel H. Bolton, Sec.

Dec. 12.—Northeastern Kansas, at Hiawatha, Kan.
L. C. Clark, Sec.

Dec. 27.—Union, at Stuart, Iowa.
M. E. Darby, Sec.

1885.
Jan. 6.—Southern Wisconsin, at Janesville, Wis.
J. T, Pomeroy, Sec.

Jan. 14,—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

Jan. 21—23.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec.

Jan. 22, 23.—Indiana State, at Indianapolis, Ind.
Frank L. Dougherty, Sec.

May 28.—N. Mich. Picnic, near McBride, Mich.
F. A. Palmer, Sec.

June 19.—Willamette Valley, at La Fayette, Oreg.
E. J, Hadley, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the Bee Journal, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly Bee Journal for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly Bee Journal for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 25
" 200 colonies (420 pages)...... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts.; per doz., **40** cts.; per hundred, **$2.50.** **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00.** On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

☞ To all new subscribers who send us $2 for the Weekly Bee Journal next year, we will send the rest of the numbers of this year *free* from the time the subscription is received at this office.

Honey and Beeswax Market.

Office of The American Bee Journal,
Monday, 10 a.m., Dec. 8, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. Burnett, 161 South Water St.

NEW YORK.

HONEY.—The market is well stocked with honey which is in good demand at the following prices: Fancy white comb in 1-lb. sections, 18@20c.; the same in 2-lb sections, 16@18c.; fair to good white comb in 1 and 2-lb. sections, 14@16c.; fancy buckwheat comb in 1-lb. sections, 12@13c.; same in 2-lb. sections, 11@11½c.; ordinary buckwheat comb in 2-lb. sections, 9@10c. Extracted, white clover in kegs or small barrels, 6½@8c.

BEESWAX.—Prime yellow, 30@31c.

McCaul & Hildreth, 34 Hudson St.

CINCINNATI.

HONEY.—There is an unsatisfactory demand for extracted honey from manufacturers, while there is a fair inquiry for small packages of clover honey such as dime, ¼-lb., 1-lb., and 2-lb. jars, from the retail trade. Prices are low as arrivals exceed the demand. Extracted honey brings 5@9c. on arrival; choice white comb honey is in fair demand and sells best in 1-lb. sections. It brings 15@16c. in the jobbing way. We have several small lots of dark comb honey from parties in Illinois, and offered it as low as 10 and 11 cents per lb, without finding a buyer. Dealers most certainly mislead producers by quoting buckwheat and poplar comb honey, if they are not more successful than we are in disposing of the same.

BEESWAX.—The demand is slow and arrivals are few. Good yellow brings 26@27c. on arrival.

C. F. Muth, Freeman & Central Ave.

SAN FRANCISCO.

HONEY—Demand is not active, and is confined almost wholly to best qualities. Prices remain unchanged A vessel having 383,545 pounds on board sailed for Liverpool, England, this week. White to extra white comb, 9@10c.; dark to good, 6@8c. Extracted, choice to extra white, 4@5c.; dark and candied, 2½@3½c.

BEESWAX.—Wholesale, 24@27c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. Anderson & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. Kendel, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

Geo. W. Meade & Co., 213 Market.

KANSAS CITY.

HONEY.—The market is quiet and unchanged, with good demand and liberal receipts. Comb, ½-lb. sections, none in the market. They would bring 18c.; 1-lbs., 14@16c.; 2lbs., 13@14c. The above figures are for choice stock in regular shipping crates. Dark or large combs in rough crates sell slowly at 9 to 10c. Extracted, California, 6@7c.; white clover, 7@8c.; Southern, 5½@6c.

BEESWAX.—None in the market.

Clemons, Cloon & Co.
Successors to Jerome Twichell.

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HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

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Premium for Club of 10 Subscribers.

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This valuable book contains 166 pages, is nicely printed on writing paper, ruled and bound, and the price is $3.00. It can be sent by mail for 24 cents extra.

We can supply these books at the publisher's price, or will make a **present** of one copy for every club of TEN subscribers to the Weekly BEE JOURNAL for one year, with $20. Four subscribers to the Monthly will count the same as one for the Weekly.

Now is the time to get up Clubs. Who will work for a copy of this valuable book?

☞ The new Monthly for January will be issued next week, and the many sample copies already ordered will then be sent. We send samples free to all who wish them, or desire to get up Clubs. Now is the time to work for the Cash premiums we offer. A large club for the Monthly can be gotten up in almost every locality.

☞ Supply dealers who wish their advertisements to appear in the January number of the Monthly BEE JOURNAL should send the copy to this office *immediately*. It will have a large circulation among those who now take no bee paper, as sample copies, in addition to its regular subscribers.

☞ For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail postpaid.

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Hives, Sections, Shipping Crates, &c.

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Canadian Farmer.

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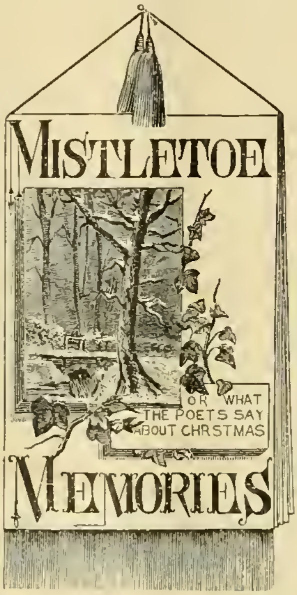
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OR WHAT THE POETS SAY ABOUT CHRSTMAS
MEMORIES

It comprises a collection of poems selected from the writings of H. W. Longfellow, J. G. Whittier, Thomas Hood, Alfred Domett, Chas. Mackay, Sir Walter Scott, Jennie Joy, and others. The whole bound in Banner shape, with rich silk fringe and tassels. For presentation, this art souvenir is vastly superior to a mere Christmas card, as it combines the advantages of both art and literature. Size, 4 by 6½ inches.

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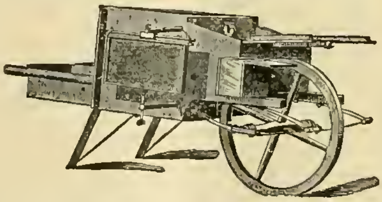

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For sale by ALFRED H. NEWMAN,
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Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

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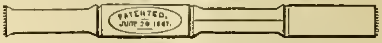
SECTIONS.
READ THIS.

A word of explanation in regard to the infringement suit on the One-Piece Section, we deem necessary at this time.

I commenced suit against A. I. Root, in the United States Circuit Court, for the Northern district of Ohio; Stanley Matthews presiding. He decided that the patent was void for want of novelty. I have taken an appeal to the United States Supreme Court at Washington, which will decide the case, and its decision will be final. If it goes against me I will submit, but if decided in my favor, I shall expect all who have infringed will pay me damages from date of the patent.

Some unprincipled parties are advertising that the Courts have decided that the patent is void. This is not the case, as it is before the United States Supreme Court at Washington, at the present time. When that Court gives its opinion it will be final, and until it does, any one infringing will be liable for damages, if the United States Supreme Court sustains the patent.

PRICES OF SECTIONS.



One-lb. Sections	in lots of	500 to 4,000	$5.00
Ditto	Ditto	5,000 to 10,000	4.75
Ditto	Ditto	10,000 to 25,000	4.50
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The one-lb. Section is 17 inches long. For any sizes between 17 and 20 inches in length, add 5 per cent. For any sizes between 20 and 24 inches, add 10 per cent. Add the above per centage to the price of one-lb. Sections in the same quantity.

J. FORNCROOK & CO.,
50AStCtf Watertown, Wis., Dec. 1, 1884.

For Bees, Queens.
Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to
FLANAGAN & ILLINSKI,
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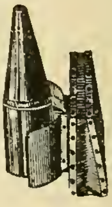
GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine. 4A1y

BINGHAM SMOKERS.



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Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

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BY B. J. KENDALL, M. D.

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☞ **A Liberal Discount to Dealers, by the Dozen or Hundred.**

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MILLS
6 inch $5
10 " $15
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Vandervort Foundation Mill.

6 Inch, Price, $25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

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Some one in every County in the United States to manufacture and sell our

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State, County and Township Rights for Sale.

We sold thousands of the Traps last season. Enterprising supply dealers will find the Traps the best paying article they can deal in. **HENRY ALLEY.**
49Atf **Wenham, Mass.**

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STANDARD AMERICAN WATCH CO.,
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46A26t

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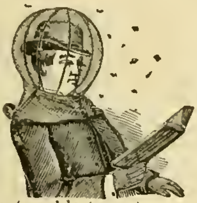

There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. **Price, by Mail or Express, $1.00.**

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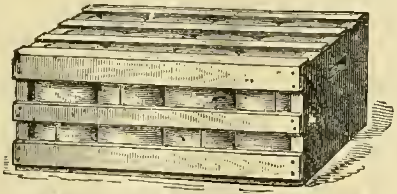

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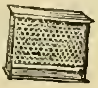

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2 50	" Every Other Saturday, *Lit.*	s-m	4 10
1 50	" Our Little Ones, (*O. Optic*)	m	3 25
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1 50	" Farmers' Review	w	3 20
1 00	" Herald, *Independent*	w	2 85
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2 50	" " "	s-w	4 40
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1 00	" Times, *Democratic*	w	3 00
1 50	Louisville Courier Journal, *Dem*	w	3 30
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4 00	" Art Amateur	m	5 25
1 50	" Christian Herald, *Ills*	w	3 20
1 00	" Century, *Literary*	m	5 70
2 00	" Demorest, *Ladies*	m	3 70
1 75	" Golden Argosy, *Lit*	w	3 25
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00	" North Amer. Review	m	6 30
2 00	" Phrenological Journal	m	3 75
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2 20	" Scientific American	w	4 95
1 00	" Times, *Ind. Republican*	w	3 00
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1868. 1884.

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WAX ON SHARES,

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Why not send me your Wax

NOW

to be made into the best Given Foundation on shares, or at a low cash price per pound for making, during the less-hurried winter months.

If you have no wax, perhaps your store-keepers have, and it will pay you to buy and ship to me.

Write and get my present low terms. I pay highest market price in

CASH FOR WAX.

Apiary for Sale.

I offer for sale one of the best apiaries and very choicest location in Southern Michigan.

No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

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I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

HIVES IN THE FLAT,

OR MADE UP COMPLETE,

Either for Comb or Extracted Honey, cheaper than many can procure material at home. Write for special prices in quantity, and state the number wanted.

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Vandervort Comb Fdn. Mills,

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ESTABLISHED IN 1861

THE WEEKLY BEE JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., December 17, 1884. VOL. XX.—No. 51.

THE AMERICAN BEE JOURNAL

PUBLISHED BY
THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.
925 WEST MADISON ST., CHICAGO, ILL.
Weekly, **$2** a year ; Monthly, **50 cents.**

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Subscription Credits.—The receipt for money sent us will be given on the address-label of every paper. If not given in two weeks after sending the money, write to us, for something must be wrong about it. Do not wait for months or years, and then claim a mistake. The subscription is paid to the END OF THE MONTH indicated on the wrapper-label. This gives a continual statement of account.

Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

ADVERTISING RATES.

20 cents per line of space, each insertion.

For either the Weekly or Monthly Editions.

A line of this type will admit about 7 words. ONE INCH will contain TWELVE lines.

Transient Advertisements must be paid for in advance.

Editorial Notices will be inserted at the rate of 50 cents per line.

Time Discounts on advertisements will be made as follows : **On 10 lines** and upward, 3 insertions, 5 ⅌ cent.; 6 insertions, 10 ⅌ cent.; 9 insertions, 15 ⅌ cent.; 12 insertions, 20 ⅌ cent.; 26 insertions, 25 ⅌ cent.; 52 insertions, 40 ⅌ cent.

On 50 lines and upward, 1 time, 5 ⅌ cent.; 3 insertions, 10 ⅌ cent.; 6 insertions, 15 ⅌ cent.; 9 insertions, 20 ⅌ cent.; 12 insertions, 25 ⅌ cent.; 26 insertions, 30 ⅌ cent.; 52 insertions, 50 per cent.

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TO CORRESPONDENTS.

Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

To Canadians.—We take Canadian money for subscription or books ; and Canadian postage stamps may be sent for fractions of a dollar.

FOREIGN POSTAGE, EXTRA :

To Europe—Weekly, 50 cents ; Monthly, 10 cents.
To Australia—Weekly, $1 ; Monthly, 20 cents.

George Neighbour & Sons, London, England, are our authorized agents for Europe.

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is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenness and neatness of any that is made. It is kept for sale by Messrs.

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C. F. MUTH, Cincinnati, O.,
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DOUGHERTY & McKEE, Indianapolis, Ind.,
CHAS. H. GREEN, Berlin, Wis.,
CHAS. HERTEL, Jr., Freeburg, Ill.,
WM. BALLANTINE, Sago, O.,
E. L. ARMSTRONG, Jerseyville, Ill.
ARTHUR TODD, Germantown, Philadelphia, Pa.
E. KRETCHMER, Coburg, Iowa.
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and numbers of other dealers.

Write for SAMPLES FREE and price list of supplies, accompanied with

150 COMPLIMENTARY.

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883.

We guarantee every inch of our Foundation equal to sample in every respect.

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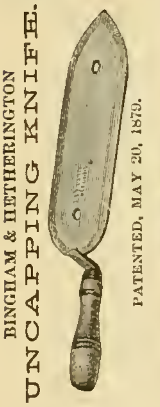
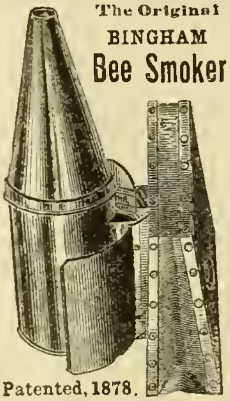
ORIGINAL PATENTS.


BINGHAM & HETHERINGTON
UNCAPPING KNIFE.
PATENTED, MAY 20, 1879.



Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

Bee-keepers will save money and vexation by buying genuine Bingham smokers and Bingham & Hetherington Uncapping-Knives first. We neither make nor handle any other supplies; but of these we are the original inventors, and only legal makers, and have had over 45,000 in use from one to five years, and receiving but one letter of complaint.

With European and American orders already received for over 3,000, there is evidence that 1884 with us is not likely to be an idle one. Also that such goods as we make have met the advanced wants of the most advanced bee-keepers in Europe and America.

Prices, by mail, post-paid.

Doctor smoker (wide shield)..	3½ inch..	$2 00
Conqueror smoker (wide shield)	3 " ..	1 75
Large smoker (wide shield)....	2½ " ..	1 50
Extra smoker (wide shield)....	2 " ..	1 25
Plain smoker	2 " ..	1 00
Little Wonder smoker..........	1¾ " ..	65
Bingham & Hetherington Honey Knife, 2 inch....................		1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

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Sent by mail, on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding — Swarming — Dividing — Extracting — Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75 cents;** 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject: suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, 40 cents, or $3 per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, **$2.00;** in paper covers, **$1.50.**

Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or $8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. **CHICAGO, ILL., DECEMBER 17, 1884.** **No. 51.**

THE AMERICAN
BEE JOURNAL

Published every Wednesday, by
THOMAS G. NEWMAN,
EDITOF AND PROPRIETOR.

☞ This being No. 51, one number more will close the Volume of the Weekly BEE JOURNAL for 1884. Nearly all of the subscriptions will run out in a few days and we would respectfully request such readers and patrons to sit down as soon as this article is read and send us the renewal of his or her subscription for 1885, and thus prevent the loss of a number and the consequent pleasure of the weekly feast it presents.

The Elements of Success.

The *Praire Farmer* well says that "if a person would reach the very highest success in horticulture, he must love trees and plants. Must love to look at them, to inquire into their wants and requirements, and to administer to their wants as living things. If a man loves a tree for its beauty, for its shade, for its fruit, and for its company, and loves to study varieties of fruits and habits of plants and trees, then he has the first rudimentary qualifications of a tree and fruit raiser, and may enter on work with assurance of success."

The same rule will apply to apiculture. A person who would succeed, should love the bees and their products; must love to look at them, ascertain their requirements, and administer to their wants. No others can expect to succeed. Though it is not essential that a person should enjoy the eating of honey, it is still desirable that such should be the case—for some human stomachs will not endure its sweetness. In such cases, however, a glass of sweet milk drank after eating the honey will *usually* cause a pleasant condition of the system generally, and add to the health of the person using it.

If one loves the honey-bee for its docility and beauty, for its pleasant hum and sporting flight, for its industry and work, for its architectural skill and indomitable energy, then the first-principles of a bee-keeper presents themselves, and such may safely proceed, expecting ultimate success.

In this, as in all other departments of business, it is only the careful and practical that may hope to succeed. Nature has provided the health-giving delicious nectar in myriads of beautiful flowers, which deck forest, field and garden, and developed the bees to gather this abundant sweetness and store it in quantities far exceeding their wants—providing an opportunity for man to step in and second the efforts of Nature and the bees, and utilize the surplus honey for his pleasure and sustenance.

Bees and flowers are so closely allied, so dependent the one on the other, that we may well love both. What is there in all the Creation so soul-inspiring as a cultivated garden of Nature's flowers of variegated hues and heavenly grandeur? None but the unfortunate or despondent can fail to enjoy Nature in her garb of beauty, decked by the bounteous hand of Deity!

To produce a garden of living gorgeousness, we may all aspire and long enjoy its gratifying results. We may as well become enthusiasts upon bees and flowers, for apiculture and horticulture go hand-in-hand.

☞ Before Vennor died, he had completed the manuscript of his almanac for 1885, which has just been issued. In his general forecast he says: "We are in a moist period, which will continue for two years, extending over the northern and middle States and Canada." The fall of 1884, he predicted, would be very open. He also predicted an unusually green Christmas and a mild New Year.

☞ We have received 10 large quarto volumes of the "Tenth Census of the United States," and shall publish in the BEE JOURNAL for next week, the statistics therein given on honey and wax for all the States and Territories. The census gives no statistics on bees—or at least we have not been able, so far, to find any. We will give a thorough examination and report them, if any are found. The Secretary of the Interior has our thanks for forwarding these volumes, which our visitors can examine at their pleasure, if they so request. Their weight is about 75 pounds, and they were received by mail.

☞ The next issue of the Weekly BEE JOURNAL is No. 52, and concludes the Volume for 1884. On account of the great labor on the Indexes, it will be *two days later than usual.* Our subscribers will please take due notice, and not expect it before that time.

Catalogues for 1885.—We have received the following:

Drake & Smith, Bristol, Vt.
C. W. Costellow, Waterborough, Me.
J. E. Pryor, Dexter, Iowa.
C. M. Goodspeed, Thorn Hill, N. Y.
T. A. Pool, Greensburg, Ind.

☞ We have received a copy of the Greenwood, Neb., *Hawkeye* which contains the following notice of the "Greenwood Apiary" owned by Mr. M. L. Trester:

> The apiary is situated in the west part of the town, and has an admirable location. The proprietor has 206 colonies of Italian and hybrid bees. He has erected a large and commodious extracting establishment, and has a yearly capacity of 20,000 pounds of extracted honey. The honey is of the finest and best, is strictly pure and free from adulterations. The proprietor keeps on hand at all times plenty of good, pure honey, which can be had at reasonable rates. The apiary has been visited by some of the leading bee-men of the State, and all say unhesitatingly that Greenwood takes the cake from them all.

ALFILLARILLA, OR FILAREE, A California Honey-Plant.

Our California correspondent, W. A. Pryal, writes us as follows concerning this honey-plant:

The alfillarilla is an *Erodium*, and two species grow in California, viz: *E. circutarium* and *E. muschatum;* they belong to or are a form of "crane's-bill." The seed-pods, seed and parts thereof are quite odd, very much like those of the geranium. The early fall rains which usually commence early in October are just sufficient to start the sharp-pointed and spiral-tailed seed of the filaree, as it is commonly called, into existence. The genial sunny weather which follows these showers, and which weather is considered the finest California can boast of, causes the plant to spring up at once into vigorous life, as if by magic.

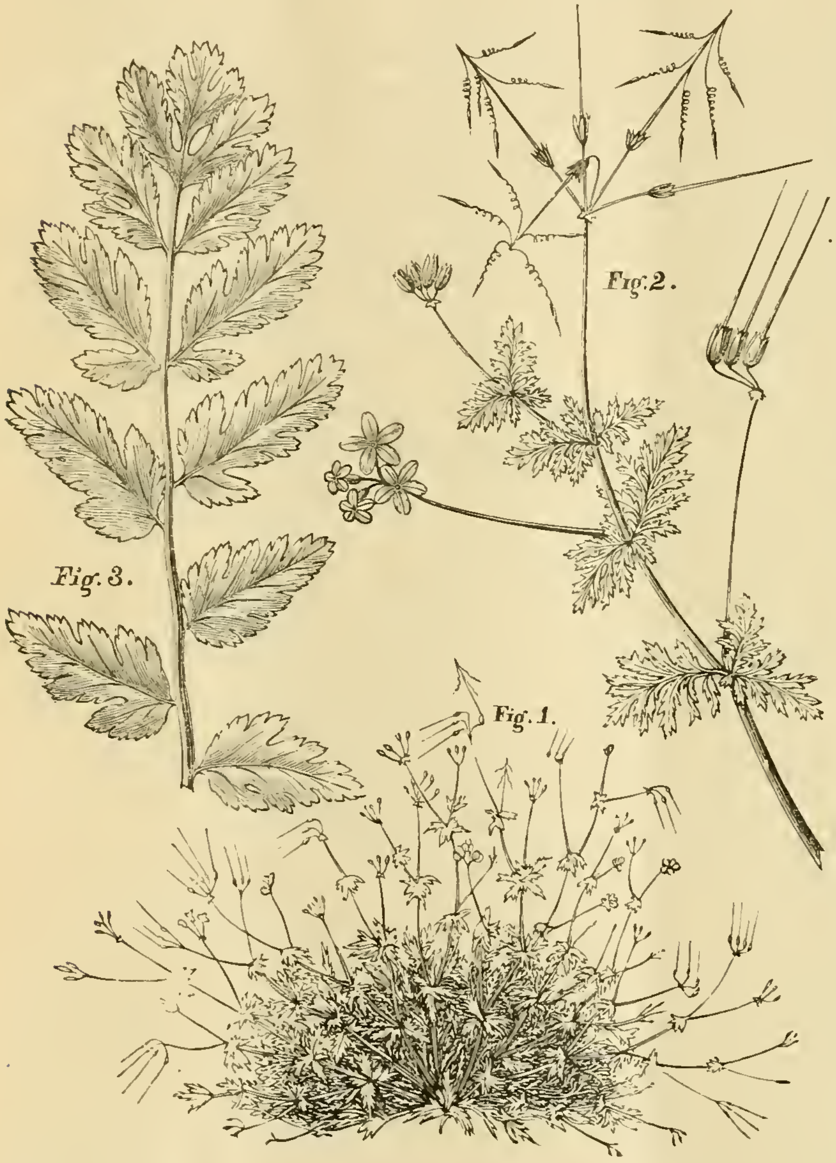
Fig. 3.
Fig. 2.
Fig. 1.

Its growth is rapid, and by the first of December many of the plants may be found in bloom, and if the season continues favorable, they will be a foot or more in heighth by the middle of February. Damp and cold weather retard its growth and prevent its blooming for some weeks beyond its usual time. On cultivated soil it grows very rank; while on hill and pasture lands it rarely attains the heighth of four inches, and it is of a trailing habit, while that on fertile soil is tall and robust. From my observations I believe that the honey from *Erodium muschatum* has not that "rankish" taste as has *Erodium circutarium*, but the former is more "musky." The engraving, Fig. 1, shows the general form of the plant; Fig. 2, part of the flower stalk, showing flowers, seed-pods, and the seed ready to fall to the ground; and Fig. 3, a leaf.

Its Honey Qualities.—Honey obtained from these plants candies shortly after being taken from the combs. Its chief value is that its greatest flow of honey comes at a time when honey is much needed for stimulating the queen to greater exertions in laying. The flow of honey is enormous while it lasts, and the bees soon fill the lower part of the hive with it. Its time of blooming, to any consequence, is about Feb. 15, or a little later, and often so continues until the latter part of April. Like all California honey gathered during the winter months and early spring, it is of a pretty dark color.

As Food for Stock.—It is one of our "best weeds," for such it is, though not a noxious one, as it is easy to eradicate. Horses, cattle and swine are quite fond of it. Its fattening qualities appear to be excellent. Milk obtained from cows which have grazed on pastures where *Erodium muschatum* grows, has a musky flavor—so much so that many people are loth to drink it.

The plants withstand our severest winters, and possibly may be introduced into other States. It is our earliest honey source, and all honey gathered from it is consumed by the bees in brood-rearing, so whatever bad qualities it has are not detrimental to the apiarist.

Besides the names which I have mentioned, it has other common names among our people, the principal one being "pin-weed;" and by referring to the engraving, one can perceive why it is so called. It grows everywhere, in the highway, the garden, back door-yard, in the valley and on the hill-top, on high, dry and low ground.

* * *

☞ The regular annual meeting of the Indiana State Bee-Keepers' Association will be held on Thursday and Friday, Jan. 22 and 23, 1885. The meetings will be conducted in the rooms of the State Board of Agriculture, on the corner of Tennessee and Market Streets, in Indianapolis, Ind. It is proposed to make this the most important and interesting meeting of bee-keepers ever held in the State. An extensive programme, including all questions of importance to bee-keepers, is being prepared and will be soon sent out to bee-keepers throughout the State. Prominent apiarists from neighboring States have been invited to assist and presumably many of them will be in attendance during the meeting. These gatherings are of vast importance, especially to beginners, and all those at all interested in this important industry should make it a point to attend this meeting.

Frank L. Dougherty, *Sec.*

* * *

☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.

W. B. Lawrence, *Sec.*

Bee-Keeping in India.

Bee-keeping in India, which appears to be one of the lost arts, has now found a champion in Mr. John Douglas, of the Indian Telegraph Department, says the London *Post*. Apiculture may yet become a happy resource to the indigent population of India, both as adding another article to their dietary and as eking out their scanty means. In some districts wild honey is said to be eagerly sought after by the native population as an article of food, an offering to the gods, and a soothing syrup for fractious infancy.

The first question for Indian apiculturists is the domestication of the great tiger honey-fly. The choicest honey is produced by this ferocious insect with a villainous sting, named in different parts of the country Bhonwara, Bhanwar, Bhaur, and great tiger honey-fly; but the most worthless sort is obtained from an amiable little insect about a quarter of the size of a common house-fly, which offers no objection to being observed, possibly aware that the intruder will obtain very inadequate compensation for his trouble. This species usually builds low down near the ground, under stones or in the clefts of trees; its nest is sought after by children, who eat up honey, comb, and grub on the spot, the bee meantime accepting the situation with true Asiatic philosophy.

Far different is the fate of him who ventures to disturb the Bhonwara bee, which attacks the traveler on the slightest provocation, and very often strikes on the principle that prevention is better than cure. A swarm of these bees have been known to put a regiment of cavalry to flight, and innumerable are the instances in which man and beast have fallen victims to their unrelenting animosity. They build their nests on ledges of rock in steep and inaccessible places, and to obtain their honey, which is said to rival in flavor the celebrated honey of Mount Hymettus, the native hunter has to exercise much caution and dexterity.

The hunter of these bees waits for a dark night, and starts forth after 9 p. m. Having selected the spot he intends to rifle, he prepares to reach it either from above or below, according as seems most feasible; should he ascend he does so by means of a ladder; should he decide to descend, a number of thin, green bamboos are spliced together with fibre and let down over the face of the precipice. One end is fastened to a tree or stake driven into the ground, and over this the brother-in-law of the descending man keeps watch. This particular relative is chosen as being the least likely to favor foul play, since on him, in case of accident, would devolve the care of the widow and children. The man takes down with him a basket, a knife, and a bunch of dried grass, to which he sets fire on arriving opposite the nests. The bees, aroused by the glare, desert the combs in thousands, but they are too stupified by the smoke to do anything but buzz aimlessly about, alighting on the rocks and branches, and even on the person of the hunter himself, without attempting to sting. The comb is cut away and dropped into the basket, which, when full, is pulled up by those above. Some of the hunters who draw honey in the daytime rub themselves with the juice of a plant the aroma of which bees cannot endure; for these insects have very sensitive organs of smell, and it would appear that the capricious likes and dislikes they show for different persons depend on their olfactory nerves. It is well known that some people can handle bees with impunity, while others dare not venture within 50 yards of them. The acuteness of this one organ is, however, counterbalanced by their total deafness.

Since Virgil wrote the Fourth Georgic, his recommendation has been followed not to have the hives too near the dwelling house, lest the presence of man should disturb the bees' peace of mind; but the Kashmir peasant builds his hives actually in his house, and with the best possible results. Round, tubular cavities are left in the walls, extending right through from the inside to the outer air. They are lined with mortar worked up with the down of thistles. The ends of the tubes are closed with platters of red earthenware, the outer platter having a circular hole in its centre to enable the bees to pass in and out. When the time for taking the honey arrives, the house-father removes the inner platter, and lighting a wisp of straw blows the smoke into the hive; this causes the bees to rush precipitately towards the outlet, and enables the man to cut away the comb with a knife. Enough is left hanging round the further end of the hive to encourage the swarm to return and begin their labors again.

In "Moorcraft's Travels" we find his observations on bee-culture in the Himalayas as follows:

"In most villages of the northern range of the Himalayas, bees are kept, and honey, the produce of the wild or domesticated bee, is an article of sale. It is commonly sold in the bazaar at from four to six seers for a rupee, and, although, not much thicker than syrup, is of a flavor equal to Narbonne and less cloying to the stomach. There is no great demand for wax, otherwise this might also be plentifully supplied. At present the comb, after the honey is compressed, is thrown away. The domestic bee is known by the name of mahru, mohri, and mari. It is not much above half the size of that of Europe, but it is very industrious and mild tempered. The wild bee is termed bhaonra, a name by which the people of the plains designate the humble-bee, but is not half the bulk of that insect, though larger than the domestic bee of Europe. It is of a darker color generally, and has longer and broader wings. Its temper is irascible, and sting, venomous. It commonly builds its nest under projecting ledges of rock, overhanging, steep, mural precipices, in a situation almost inaccessible to bears and men. The hive contains a large quantity of both wax and honey. The latter, if gathered before the month of Bhadra, is fully equal to that of the domestic bee, but in that and the following months is said to produce intoxication followed by stupefaction. The effect is with some probability ascribed to the bees working on the flower of a species of aconite, which is in bloom in Bhadra and Asharh, and which, growing high up the mountain, is beyond the flight of the domestic bee."

That the virtues of the honey depend on the particular pasturage the bee has found, is well known, and every school boy has read in Xenophon of the deleterious effects the honey of Trebizond had on the soldiers during the retreat of the Ten Thousand. Narbonne honey owes its peculiar excellence to the rosemary plant, and the best honey years in India are when the strobilanthes is in bloom. There are many species in this genus, and they flower once in seven or ten years, about the month of May. Immediately the flowers wither and and fall off, the plant itself dies, a new crop afterwards springing up from the seed. This flower has a strong and sweet scent, and whenever it is in bloom colonies of bees migrate from all parts of the country to feast on the honey and to rear their young. At such times honey becomes plentiful and cheap, and is of the finest flavor.

☞ The sixteenth annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 21, 22 and 23 of January, 1885. The executive committee are determined to maintain the high standing and enviable reputation which the Association has justly gained in the past, and at the coming convention they propose to outdo all former efforts. The meeting will surely be the largest and most interesting ever held in America. No bee-keeper can afford to stay at home. All are invited. All implements of the apiary sent to the Secretary, will be properly arrayed to compare favorably with others on exhibition, and will be disposed of or returned, as the owner directs. Reduced rates for board at hotels.

Geo. W. House, *Sec.*
L. C. Root, *Pres.*

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly Bee Journal for one year at $1.25 for the two.

CORRESPONDENCE.

For the American Bee Journal.

Hibernation.—In Rhyme.

WM. F. CLARKE.

Rest,—busy little workers all,—
Through winter's dreary hours;
Into a peaceful torpor fall,
And hoard your latent powers.

Your domicile is not a sieve
With air-drafts coursing through—
In such a house I could not live,
Neither, my pets, can you.

You are not buried in a pit,
A cellar, or a clamp;
Never by ray of sunshine lit,—
Cheerless, and foul, and damp.

Your dwelling is a chaff-packed room
Raised above toads and mice,
Meant for a home, and not a tomb,
Propolized tight and nice.

A column of heaven's purest air
Beneath your cozy nest,
Your native instincts will prepare
To suit your moods of rest.

Whene'er Jack Frost relents his grip,
And there's a thawing day,
Rouse up! a little honey sip,
And have a spell of play.

Dance on th' alighting-board a jig,
Or pirouette on high;
No need to wallow, like a pig,
When you can have a fly!

Don't eat a bit of pollen, dears,
While you are on the frolic,
For, if you do, James Heddon fears
You'll die of bilious colic!

Your play-spell over, tightly hug
And cluster close together,
Then each can sleep, "snug as a bug,"
All through the coldest weather.

Soon blust'ring March will shake you up,
And whisper loud of spring:
Your master, then, a little cup
Of sweet, will to you bring.

The queen, her sleepy head will scratch,
And take the hint to lay,
Then you must seek the willow-patch
Upon the first fine day.

With catkin pollen feed the brood
And nurse them up to strength,
Till nectar from the maple-wood,
Rewards your search at length.

Then, as the hive grows populous
With vigorous young bees,
Each of you, without "muss or fuss,"
Depart this life in peace.

Your course complete—your work well done—
Die without pain or fear:
And thus your history will run,
"ESCAPED THE DIARRHŒA!"

Speedside, Ont.

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Stuart, Iowa, at 10 a. m. on Saturday, Dec. 27, 1884. All who are interested are invited to attend.

M. E. DARBY, *Sec.*

☞ The Willamette Valley Bee-Keepers' Association will hold its second meeting at La Fayette, Oregon, on the third Tuesday in June, 1885. All who are interested are invited to attend.

E. J. HADLEY, *Sec.*
F. S. HARDING, *Pres.*

For the American Bee Journal.

Few Uncapped Sections in the Fall.

G. M. DOOLITTLE, 40—80.

How to manage our bees so as to secure the greatest yield of comb honey, is a question of great importance to all those who are engaged in producing such honey for market, hence we often have articles on this topic giving us instruction regarding it. But comb honey is of little value unless thoroughly sealed or capped over; and from the reports which I get telling of *much* unsealed honey, it would seem that, "How to manage our bees so as to have few uncapped sections in the fall," is a question of nearly as much importance as the first; yet it is one about which very little is said in print.

For years I was troubled by having from ¼ to ½ of the combs in the sections not fully sealed at the close of the honey harvest, which were only salable at a reduced price; but of late I have very few of such even in a poor season. After experimenting for a year or two regarding the matter, I became convinced that the cause of the trouble was in giving the bees too many sections, and especially conducive to this was the plan of tiering-up sections late in the season. How often have I, years ago, spoiled a promise of an abundant yield of comb honey by tiering-up four or five days before the honey harvest closed!

To tier-up sections profitably requires considerable tact,and especially do we want a thorough knowledge of the honey resources of the field which we occupy. I think that there is too much injudicious talk in some of our bee-papers regarding our not allowing the bees under any circumstances to cluster on the outside of the hive, the idea being generally conveyed that when bees thus cluster out they need more room.

Now, it depends upon when this clustering out occurs, whether more room is needed or not; and hence I said "injudicious talk." If the clustering out occurs at the commencement, or in the heighth of the honey harvest, then more room should be given; while if at the latter part of the honey harvest, or in a time of honey dearth, no more room is needed; for more room at this time results in one case in many unfinished sections, and in the other to an absolute waste of time used in enlarging the hive. To illustrate: During the past season we had a day and a half of good honey secretion, a little past the middle of the basswood bloom. As, at this time, I had on each hive, section room of only about 20 pounds capacity, the bees began to be crowded out; and hoping that the weather might yet be favorable for a week or more, I spread the sections on a few hives by placing some empty ones between those nearly full, giving at most only about 35 pounds capacity, while when all is favorable, I use 60 pounds capacity. The result was that the bees immediately took possession of the empty sections, while the weather turned unfavorable again, and when the season was over, I got no more than 5 to 10 pounds of capped honey from these hives, while those not touched gave 20 pounds of nice, capped honey. In this case the bad weather was the cause, for the spreading was seasonable, but in former years I had been the cause by spreading or tiering-up but a few days before the honey harvest closed.

Again, after the basswood bloom had failed, there came on a very hot spell when not a bit of honey was to be obtained, and the result was that the fronts of my hives were black with bees. According to the advice above alluded to, I should have given more room, and if the bees then persisted in clustering out, I must take my smoker and smoke each colony until they all went in and staid there. Nonsense! At such times the bees are doing just as much for the benefit of the apiarist, hanging on the outside of the hive, as anywhere.

But to return. My plan of operation to secure all capped sections is as follows: When the bees show, by building little bits of comb here and there about the hive, that they are ready for the sections, I put on sections to the amount of about 20 pounds, and leave them thus until the bees are well at work in them, when they are spread apart and about 10 pounds more of room given them. When this room is fully occupied, I give room at the sides of the hive of about 15 pounds capacity; and were I using the tiering-up plan I should have my surplus arrangement so arranged that at this time I could raise up about one-half of the sections already on, putting empty sections under them instead of raising up the whole 30 pounds, thus giving them more room, a little at a time, as the bees have need.

By the time the bees fully occupy the 15 pounds of room given at the sides, the first 20 pounds given them is ready to come off; and when this is taken off, the partly filled sections at the sides are raised by cases and put in the places of those which have been taken off, while empty sections are given at the sides, for from 15 to 30 pounds according to the size of the colony. Thus I keep taking off and putting on sections, taking the full from the top and putting the empty sections at the sides, until the season begins to draw toward its close, when as fast as those partially filled sections are taken from the sides to replace the full ones taken from the top, the side-spaces are closed up till all are on top. Then as fast as the sections are finished there, the top-space is contracted till only the original 20-pound space remains. In this way the bees are given all the space they really need, while the chance for many uncapped sections in the fall is quite small.

By a little study the tiering-up plan can be made to conform to the above, and worked on the same principle. I think that any plan which requires the tiering-up of from 30 to 40 pounds capacity, or the spreading out of the same number of pounds at one time, is a wrong policy to adopt; while the giving of a small amount of surplus room as needed, seems to me to be a wise course to pursue. I now use a section 5⅜x3½x2 inches, outside measure, and find that while it works to the best advantage in my hives, it also sells for fully as good a price in all of our Eastern markets as does the 4¼x4¼ or one-pound section of honey.

Borodino,⊙ N. Y.

For the American Bee Journal.

Home-Made Honey-Extractor.

E. A. THOMAS.

While visiting a friend of mine in Massachusetts, I had the opportunity of seeing and testing his new honey-extractor, which, for rapidity and ease of manipulation I have never seen equaled. My friend is an excellent machinist, and made this extractor himself. While recognizing the fact that the cost of the machine will prevent its coming into general use, I am inclined to believe that it would be desirable for those who run their apiaries for extracted honey, and have considerable extracting to do. The following is a description of it, as near as I can give it:

The can, which is made of block-tin all in one piece, is 3 feet and 4 inches high and 23 inches in diameter; there is a space of 12 inches under the comb-basket, giving a storing capacity of about 200 pounds. The comb-basket is 18 inches deep and 14½ inches square, and is attached to a shaft running in a standard in the centre of the can. The bearing is so arranged that no honey can get to it, and can, therefore, be kept well oiled. A reversible basket can be used if the operator so desires. Now I am coming to the part wherein it differs from all other extractors which I have ever seen. On the lower end of the shaft to which the basket is attached, is a beveled gear running in a corresponding one on a horizontal shaft extending from the centre under the can, to the circumference. Here, again, is another set of beveled gears, carrying the motion to an upright shaft running in boxes outside of the can. The upper end of this is geared to a 6-inch gear attached to the side of the can which has a handle for turning. The small gears are 1½ inches in diameter, and the shafts are ⅝ of an inch.

From the above description the reader will perceive that there is nothing on the top of the can over the comb-basket to interfere with the putting in and taking out of combs, or the removal of the basket for cleaning; also that the turning-wheel is upright, which gives a much easier and more natural movement than the round and round motion of a horizontal wheel. Perhaps the reader may think this is of but little consequence, but let him turn the extractor all day, as some have to do, and I think he will change his mind.

Notwithstanding the fact that the extractor is geared up so much, it is easier to run than any I ever saw. This is due in part to the well-fitting bearings and the accuracy of construction. The whole machine is well and solidly built, and there is no shake whatever to the comb-basket. Only a slow motion of the turning-wheel is required to throw out the honey, and the comb-basket can be revolved very rapidly, if necessary, with an extra exertion on the part of the operator.

Another good thing about it is the rapidity with which it can be taken apart and put together. The comb-basket can be taken to pieces, every thing taken out, and all put together again in less than a minute.

Rural New Yorker.

The Hunting of Bee-Trees.

PROF. A. J. COOK.

I am requested to give directions for finding the haunts of bees in the forests. I gladly do this, though unless one wishes to hunt bees for the pleasure only, it is a non-paying business. The time spent in finding the bees, the usual condition of the colony with crooked combs, and little honey, and the trouble to secure the bees, honey, and combs in such a state that they will be of value, together with the fact that the owner of the tree does not like to have his trees disturbed, even though he may give his consent, make this business as a business anything but desirable.

To understand bee-hunting, we have only to remember that bees like sweets, and are sure to find and to sip them; and that the bees, as soon as full, will circle about, as if to mark the locality, and then dart off straight toward the tree or hive where they are to store the nectar.

In late fall after bees have ceased to gather honey, we may soon attract them by burning an old piece of honey-comb; at other times they may be taken from the flowers. To "line" bees one should have a small box without a bottom, and with a movable glass top. This box should be six inches each way, and on one side there should be a shelf within, three or four inches wide on which a piece of comb may be laid. With this box and a bottle of water sweetened with honey, or sugar, one is prepared for operations. When a bee is discovered in the woods on a flower, the box is placed over it, and as soon as the bee commences to sip the sweet liquid which was turned into the empty cells of a comb previously fastened to the shelf in the box, the cover should be removed. The bee will soon fly, and must be watched carefully. After a few circles, each circle bending toward its home, the bee will dart off in that direction. Soon it will return with others, and as soon as the line is made certain, the hunter can go a few rods to one side and find another line, and of course where these lines meet will be the tree. If in the region of a bee keeper, one must be careful or the lines will take him to some one's hives, and his time will be lost. If no bees are found on the flowers, then the bees can be attracted to the sweets in the box by burning the comb as suggested above.

When once found, it is better to climb up and cut the bees out rather than to fell the tree, if this is possible. A little smoke and the jarring will so frighten the bees that the danger from stings is very slight. It takes some experience to line bees quickly; but old bee-hunters will find bee-trees in a surprisingly short time.

Agricultural College, ♀ Mich.

For the American Bee Journal.

Queen-Excluding Honey-Boards.

W. Z. HUTCHINSON, 68—94.

Of late, quite a number of inquiries have come to me asking for information in regard to the Heddon skeleton or slat honey-board; and from the tone of many of them, it is evident that the writers regard this honey-board as queen-excluding. Such is *not* the case; Mr. Heddon has never claimed that they are. He says that they *discourage*, but do not *prevent* the queen from entering the surplus department; and so far as my experience goes, Mr. Heddon is correct.

Whether a queen-excluding honey-board is needed, depends upon the size and shape of the brood-nest, and the method of management. With a large brood apartment, and especially one which approaches a cube in shape, there is less inducement to the queen to invade the surplus department than with a flattened or small brood-nest. The advantages of a small, flat brood-nest are, that it is kept so full of brood that there is little room in it for honey, and the surplus department is brought so near the centre of the brood-nest that nearly all the honey is stored in the surplus department and sold for at least twice as much per pound as sugar will cost to feed the bees for winter. Sugar is a safer food for winter than honey; and it is *hoped* that these small brood-nests will be free from pollen upon the approach of winter.

With an ordinary eight-frame, Langstroth hived filled with combs, the queen has so seldom left the brood-nest when working for comb honey, that I should not care for a queen-excluding honey-board were it not for the swarms. Let a swarm be hived upon empty combs, and the queen will not go into the sections; but let it be hived upon empty frames, and let there be foundation or comb in the sections, and the queen will make a brood-nest of the surplus department; she will also do so if the brood-frames are filled with foundation, and the sections with comb. In working for extracted honey, the queen is *quite* likely to take up her field of labor in the surplus department.

I am strongly in favor of having the brood occupy one part of the hive, and the honey another, to a greater extent than has yet been generally accomplished; and to secure this result, I know of no better plan than to use a queen-excluding honey-board.

The objections to the perforated zinc for a queen-excluding honey-board are, first, its cost; second, its lack of rigidity. When first put on it does very well; but, of course, the bees stick it down and connect it by means of brace-combs, with the frames below, and when it is removed it is liable to be bent or kinked so that when again placed upon the hive the bee-spaces above and below the zinc are not perfect. Where the space becomes too small, the bees stick the zinc fast with propolis; where the space is too small, they build brace-combs.

To make the Heddon honey-board queen-excluding, I have placed the slats five-thirty-seconds of an inch apart, and such boards are a success; but the difficulty is in adjusting the spaces to a nicety, and keeping the slats in place. To overcome this difficulty, I have, during the past season, used honey-boards of perforated wood. Their construction is as follows: Take lumber ¼-inch thick, cut it into lengths as long as the hive, and of such width that three pieces will cover the top of the hive. With a saw of such thickness that it will cut a kerf five-thirty-seconds of an inch in width, cut slots into these pieces of wood, something after the manner of the perforated zinc. I make the slots about 3 inches in length, one inch apart, and they "break joints" as do the perforation in the zinc. A frame of ⅝-inch stuff as large as the top of the hive, has the inner corners of the end-pieces rabbeted on one side, and into these rabbets are placed the perforated pieces, where they are fastened with brads. This gives a honey-board with a raised rim of about ⅜ of an inch around its edge, which allows a bee-space below the sections. Such a honey-board always preserves the bee-spaces perfectly, and, as yet, no queen has passed through them.

The perforation in a zinc honey-board need to be a trifle smaller, to restrain the queen, than in one ¼ of an inch thick.

After using queen-excluding honey-boards for two years, I am unable to see that they lessen, or in any manner affect the amount of surplus honey secured.

Rogersville, Mich.

For the American Bee Journal.

That New Zealand Comb Foundation

G. ELLIOTT.

In the BEE JOURNAL for Sept. 3, 1884, there is a letter from "Another New Zealand Bee Keeper," and an article copied from the *New Zealand and Australian Bee Journal* about our New Zealand comb foundation made by Mr. Hopkins; and as "Another New Zealand bee-keeper" wishes to inform the readers of the BEE JOURNAL that Dr. Dalziel had no grounds for getting the foundation analyzed, allow me to give my account of it, as it was chiefly through me that the Doctor acted as he did.

Dr. Dalziel showed me some samples of comb foundation which he had received from Chicago, and these looked so very different compared with the foundation which we were getting from Mr. Hopkins. The color was the same as that of the beeswax which I had always obtained from my own bees; the foundation of the cell-walls was deep, thick and soft; the sheet was more pliable without breaking; and, in fact, it was in every way such a superior article that it looked as if, with its use, there would be none of the trouble which I, and all the bee-keepers to whom I had spoken on the subject, had had with Mr. Hopkin's foundation, which was so brittle, and sagged so much after being put into the hive, that I considered the best thing that I could do would be either to get my foundation from America or possess a machine and make my own.

With this view, I inquired from a traveler of Messrs. Porter & Co., importing ironmongers, whether they had any American bee-appliances. He said that they had on hand a honey-extractor, a machine for making comb foundation, and wax to be used with the machine, and he believed that there were some other implements among them. I said that a foundation machine was what I wanted, chiefly, but I would use my own beeswax. He said that the wax which they had was much cheaper, as it was a composition largely used in America, but it was not pure beeswax. As he did not have these articles on his list, he did not know the prices, so I asked him to inquire and then let me know.

A short time afterwards I saw him again, and he told me the price of the extractor and foundation machine, but said that they had no more wax, as it had all been sold and gone to the Thames. I asked him who had bought it, and he said, "I think that it was Mr. Hopkins." He said that it had been a sample lot sent over with the machines.

A few days after the above interview, as Dr. Dalziel was going into Auckland, I asked him to call at Porter's and look at the extractor and foundation machines for me, to make what inquiry he could about the composition wax, its price, etc., as the traveler's statement might, perhaps, account for the difference in the two specimens of foundation. I believe when the Doctor made the inquiry about the wax, the employes at first said that they had never had any wax; but when he informed them of what the traveler had told me, they said that they remembered that such a parcel did once pass through their hands, but they could not remember anything very definite about it. One of them promised to examine the books and ascertain all he could about it, but if it was a sample lot, it was very likely that there would not be any entry of it.

I afterwards saw the letter which the Doctor received, stating that no record of the parcel could be found; and we thought that, considering the possible truth of the traveler's statement, and the evident difference in the two lots of foundation, that there were good grounds for suspecting the purity of Mr. Hopkin's comb foundation. We agreed to have it analyzed by Mr. Pond, of Auckland, and forward the report to the *New Zealand Bee Journal* whatever the report might be.

Auckland, N. Zealand, Nov. 8, 1884.

[The foregoing explanation is given in the BEE JOURNAL as requested, because it has twice decided (see pages 155 and 571) that the sample of beeswax sent here from New Zealand was a "pure article."

The trouble, no doubt, came from the *blundering* of the traveling salesman of the importers, who called the foundation mill "a machine for making artificial comb." Either he did not know what he was talking about, or the importers had obtained some "paraffine;" and in saying that "spurious wax" or "paraffine" was "a composition largely used in America" in the manufacture of comb foundation, he was very far from the truth. We are informed that an Ohio manufacturer has been using some as an experiment, and that is about all that can be said about it. Now let the matter rest.—ED.]

For the American Bee Journal.

Whom Can We Believe?

JOSHUA BULL.

I believe that I have carefully read every article that has appeared in the BEE JOURNAL for over a year, especially every thing bearing upon the vexed question of wintering bees; and I find so much diversity of opinions, and apparently conflicting theories advocated by those who claim to be experts in bee-keeping, that it is enough to confuse and bewilder those who have had no experience in the business. How are we to decide whether it is best to give our bees honey or sugar for winter food, upward or downward ventilation, to place them in the cellar, in a repository, or to leave them on the summer stands? One says, "Remove the bottom-board and place the hive upon a tray of dry sawdust;" while another recommends a perpendicular column of air underneath the hive. Now, with all this diversity of teaching, with so many different theories urged upon us, how are we to know whom to believe? Why, it seems to me that this wintering problem is about as far from being settled as the question of an "open sea around the North Pole!"

Are bees deficient in instinct? I was quite surprised when reading Mr. Heddon's statement, on page 501, where he said, "I have found that the judgment of man knew better than their own instincts what was best for bees." Again, on page 550, he says that "Dame Nature either forgot to endow them with it, or did not care for their failure, or herself made a failure; for they do not at all times succeed any better than the tender plant against the drouth, the beautiful shrub against the frost of winter, the sparrow against the hawk, the minnow against the shark, etc." Now, with all due respect for Mr. H., I wish to be allowed to express my objection to his assertions, for therein appears to be a grave charge against the Creator, in that Mr. H. accuses Him of indifference about his works, or of failure to accomplish what He intended.

Let us examine this matter a little before we accept it. Mr. H. may be fully convinced in his own mind that he knows better than the bees what they need; but has he demonstrated it sufficiently clear to convince others that such is really a fact? We, of course, leave every one to be his own judge about that; but in regard to the reasons which he offers in support of his assertion, that bees are deficient in instinct, I wish to say: 1. I am not aware that plants and shrubs have any instinct at all, or any powers of volition whatever, and, therefore, can see no similitude in the comparison; and so far as the sparrow, minnows, etc., are concerned, when they are pursued, overtaken and devoured by predatory animals stronger than themselves, it is no indication that they are deficient in instinctive knowledge for self-preservation, but only that they are compelled to succumb to powers greater than their own; simply the weaker is overcome by the stronger. I believe, and, no doubt, Mr. H. will concur with me in this, that if the sparrow, minnow, and all others of the weaker creatures of creation could only receive such assistance as would enable them to carry out their instinctive impulses for self-preservation, that they would never allow themselves to fall a prey to the destroyer; and, no doubt, this principle will hold good with bees as well as with anything else. Therefore, it is clear to my mind that in order to secure the best results, we should not try to controvert or in any way interrupt the plans which the bees devise for their own preservation; but when we can render them such assistance as will enable them to consummate those plans, then, and not till then, do I believe that this wintering difficulty will be successfully overcome. I am slow to believe that instinct ever leads astray or guides in the wrong direction.

"And reason raise o'er instinct as you can,
In *this* 'tis God directs, in *that* 'tis man."

THE TREE-TRUNK PRINCIPLE.—It is not in my nature to accept any theory or believe any statement simply because some certain person has said it is so, unless that person can produce some evidence or argument which will appeal to my understanding or in some way accord with my own experience; but I am quite inclined to think that Messrs. Wm. F. Clarke and A. H. Dutton are leading off in the right direction on this wintering question; and as a reason for this belief, allow me to give a little item of my own experience.

Some 35 or 40 years ago, when I was a mere lad, my father set me to work to make a bee-hive on the following plan: A box-hive 26 inches high by 16x12 inches, and in the lower part of this box-hive were fixed three honey drawers on each side, 6x6x12 inches, thus leaving an open space between them of about 4x12 inches, and 18 inches high. Over these drawers was placed a floor or bottom-board with a slot or passage-way 1x12 inches in the centre, and above this was the brood-chamber, 16x12x8 inches, then a top board or cover was put on and nailed down tight, and a door upon the back side to exclude light from the drawers and to make all snug, completed the hive. (I write this from memory, and the dimensions may not be exactly correct, but I think that they are nearly so; the principle is the same anyhow.)

A swarm of bees was put into this hive, and the whole thing was put upon a bench about 14 inches high, with blocks placed under each corner of the hive to raise it about ¾ of an inch, and there it stood just in that position during summer and winter. The bees filled it with comb clear down to the bottom of the hive; but in winter they would all cluster in this upper chamber, thus leaving an air-space below them, 12x4 and 18 inches high, except what space the comb occupied. In this condition they lived 15 years in succession without once being winter-killed.

When Mr. Clarke announced his new theory, it at once recalled to my mind the above-mentioned facts, and I felt quite inclined to believe that his idea might be correct, and, if it does not entirely solve the difficulty, it may prove to be a very important principle, and, therefore, a step in the right direction.

Seymour, Wis., Dec. 6, 1884.

For the American Bee Journal.

First Queen by Mail from Jerusalem.

ANDREW H. DIVEN.

I would say to the bee-keepers generally, that on June 23, 1884, I received a Palestine queen from Philip T. Baldensperger, of Jerusalem, Palestine, direct by mail, the cage being post-marked at Jerusalem on May 28, 1884.

The queen came through in good condition, no evidence of having suffered from confinement. About one-half of her attendant bees were dead. She began laying in less than a week after her arrival, and is now in winter quarters with a full colony of Palestines. Mr. B. and myself think that this is the first queen sent direct by mail from Palestine to the United States. If we are correct, we modestly ask that it be so placed on record; if we are in error, we invite correction.

Mr. Baldensperger wrote me as follows on Aug. 6, 1884, dated Jerusalem: "I am very glad to know that the first queen mailed from Palestine to the United States arrived safely, and that she began to lay, too. It is a great satisfaction to know that the confinement of 26 days did not injure her. In the *British Bee Journal* of Sept. 1, 1884, is a notice of an American queen which crossed the Atlantic, and the correspondent says, "Probably this is the first queen which crossed the Atlantic." I think that he refers to the "golden queens" as being the first; for Messrs. Benton, D. A. Jones and others occasionally mailed queens from Syria and Cyprus to England first, and after some rest they were sent on to America; but the queen which I sent you went through from Bethlehem via Jerusalem to the United States in 26 days."

The cage in which the queen came, I send to be placed in the Museum.

Seneca, Pa., Dec. 9, 1884.

[The cage is placed in the Museum, as requested.—ED.]

Home Farm.

To Beginners—Manipulation.

J. E. POND, JR.

I have been asked why some one of experience does not write a chapter upon manipulation. I presume the reason is that no one has thought that there was any necessity for so doing, as it was supposed that every one knew just how to do this simple work; the question having been asked, leads me to think that an article on the subject might prove of some interest—to the novice if to no one else.

In the first place, it should be well understood that a colony of bees should not be examined or manipulated unless for a purpose. The promiscuous opening of hives, pulling out the combs and disturbing the cluster in the spring, or the busy worker in warm weather, has worked much harm, and the novice will do far better in his work when his apiary becomes so large that he cannot subject his colonies to a daily overhauling.

Again, colonies should not be examined at all save to perform some actually needed work, (such for instance as an introduction of a queen or something of the kind), except in pleasant weather, and when it is warm enough for the bees to fly safely. The beginner who has it all to learn in the way of practical work in the apiary may, however, take some particular colony and experiment with that alone, by opening and examining it until he gains that confidence and expertness which comes from practice alone; for this is a part of his apprenticeship, but it should be discontinued as soon as he is able to perform the work expertly.

To examine a colony, the first thing to be done is to blow a little smoke in at the entrance, and, by the way, at no other time save when using smoke should one stand in front of his hives—all operations should be performed from the rear. In using smoke there is no necessity of blowing in a large amount, the smallest whiff is just as good as though the bees were suffocated with volumes of it.

After blowing in the smoke, the operator proceeds to the rear of the hive, and waits a moment till the bees are filled with honey, then he will proceed to take off the cover of the hive and lay it to one side; the next thing is to remove the covering mat from the frames; this, as well as all motions made around a bee-hive, should be done slowly and deliberately. Bees seem to detest any quick motions, and will resent them with a sting, when otherwise they would be as amiable as you please. After removing the mat, the center frames on one side or the other should be crowded together a little to give room to remove the outside frame. As soon as sufficient space is formed, the outside frame should be carefully taken out, examined for any desired purpose, and then carefully stood up beside the hive, or, what is better, carefully set into an empty hive or a light box made for that especial purpose.

After the first frame is removed, all subsequent manipulation comes easy enough, for all there is to be done is to take out the next frame, examine and replace it in the position occupied by the first one, and so on till all the frames are looked over, when the first frame can be set in the place of the last one taken out. In case, by reason of any inequalities or bulges in the face, it does not fit right, these inequalities may be shaved off with a sharp knife, or the frames may be set again in their original position. As the first method is much the easier, the apiarist should take care to see that each comb is interchangeable, not only with every other comb in the hive, but with every other comb in the whole apiary. This will be the means of simplifying his work, and making it easier to perform than it otherwise would be. Time is money, and every step taken to save time in an apiary is one in the right direction, and will be well appreciated on a day with the temperature at 100 F. or more, and fifty colonies to examine before night.

The manipulating of a colony is the simplest work of the apiary as it is purely mechanical and manual, and can be easily learned by practice. To know when and why to manipulate is a far more serious undertaking, and one that requires a vast amount of experience and study to fully learn, but when learned, it comprises the larger portion of what is required to make an expert apiarist.

Foxboro, ⊶ Mass.

For the American Bee Journal.

To the Bee-Keepers of Indiana.

I want to talk with all the bee-keepers of Indiana. Bee-keepers, the time is set for our annual convention on Jan. 22, 1885. How many will be present? For almost one year the executive committee of the State Association have spent much time in the way of talk and correspondence in the interest of our Society. At the State Fair we had a glimpse of our reward, a beginning of what we hope will be a grand success in the near future. All those who are sorely afflicted with remorse that they did not help us out at the Fair, can now have a chance to redeem themselves by coming and bringing as many as they can to the State meeting.

We hope that the week of heat and dust that we spent at the Fair in making the acquaintance of bee-keepers, and in making bee-keepers acquainted was not time spent fruitlessly. There is no reason why the Bee-Keepers' Society should not be, I will not say one of the largest, but the largest society which meets in the Agricultural rooms during this winter. We have the numbers and talent to make it the finest organization that will assemble in this city this winter.

I was surprised to meet so many women bee-keepers at the Fair—women who represent from 10 to 50 colonies; women who had the stamina to make a success of whatever they turned brain or hand to. Now, sister bee-keepers, assert your rights, overcome every difficulty and present yourselves at the State meeting. Let it be a meeting long to be remembered. If you have not learned all about bee-keeping, you can learn more in two days at a meeting of this kind than in a whole month of reading, for you will not only hear of the successes but of the failures of bee-keepers. On the other hand, if you think you have learned all, come and impart your knowledge to others. This meeting will be an important one. There will be many matters of interest brought before the Society in which we wish to have the voice of as many bee-keepers as possible.

MRS. C. ROBBINS, *Pres.*

For the American Bee Journal.

International Bee-Keepers' Congress.

J. P. H. BROWN.

With this I send a call for an International Congress of Bee-Keepers to be held on the World's Exposition Grounds at New Orleans, La., on Feb. 24, 25 and 26, 1885. The time selected seems to suit the majority of bee-keepers the best. This has been ascertained by much correspondence. The Exposition offers a large hall and space for exhibits free of charge. Rates of board and quarters for bee-keepers attending the Congress will be made known through the BEE JOURNAL as soon as possible.

It is likely that the Exposition will withhold all apiarian exhibits until the week of the Congress. The prospects for a large attendance are very flattering. I hope that honey-producers will come well prepared to fully tackle the question of the disposal of the honey product. The question of honey-production, and all the methods and schemes for securing the greatest surplus have been most thoroughly ventilated by our bee-conventions, and now it is time to consider the subject of the disposition of the product to the best advantage for the producer.

I appeal to the bee-keepers of America to send representatives to this Congress. In this matter no section or country should be known, but wherever intelligent apiculture is practiced, its interests should be represented.

Aside from the Congress, the sight of the foreign exhibits will alone be worth all the expense of the trip. So, fellow bee-keepers, lay aside your cares and labors for a week or two—strain a point—you have only got one life to live in this world—pack your valise and go.

Augusta, ⊶ Ga., Dec. 9, 1884.

For the American Bee Journal.

The International Congress.

☞ It is proposed to hold an International Bee-Keepers' Congress on the World's Exposition Grounds at New Orleans, La., Feb. 24, 25 and 26, 1885. An interesting programme of subjects of great importance to every bee-keeper in America will be presented and discussed. The disposition of our honey product, with a view to secure better prices will be fully considered. At the same time there will be an Exhibit of Bees and Apiarian Supplies. Fuller particulars will be given hereafter. At the time selected, the Exposition will be at its best, and excursion rates low. The bee-keepers of our country should lay aside business for a week or two, and make every exertion to attend this Convention. Come prepared with facts and statistics, and ideas arranged, to take part in its deliberations.

Dr. N. P. Allen, Smith's Grove, Ky.
W. Williamson, Lexington, Ky.
Dr. O. M. Blanton. Greenville, Miss.
P. L. Viallon, Bayou Goula, La.
Judge W. H. Andrews, McKinney, Tex.
W. S. Hart, New Smyrna, Florida.
S. C. Boylston, Charleston, S. C.
Dr. J. P. H. Brown, Augusta, Ga.
H. C. Austin, Austin's Springs, Tenn.
R. C. Taylor, Wilmington, N. C.
J. W. Porter, Charlottesville, Va.
S. Valentine, Hagerstown, Md.

For the American Bee Journal.

Bee-Hive Ventilation.

J. F. LATHAM.

On page 756, Mr. S. Corneil, in attempting a criticism of the ideas advanced by some of the correspondents of the BEE JOURNAL respecting the ventilation of bee-hives, including myself in the number, writes: "I notice that some of the contributors are in error in regard to the carbonic-acid gas produced by the respiration of a cluster of bees." . . . "These writers seem to think that because carbonic acid gas is more than half as heavy again as air, it falls to the bottom of the hive, and provisions should be made for getting rid of it at that point."

As only that portion of his comments which touches my statements, is subject to my notice, in answer I feel like saying that I think I am not "in error" if the paragraph on page 342 embodying my ideas of bee-hive ventilation is called in question.

As a compound of liquids on being shaken up will re-arrange themselves in the order of their identity, so will an equilibrium be sought by air of different degrees of temperature. This operation of natural laws is most sublimely illustrated by the phenomena which culminate in our thunder-showers. The lower strata of the earth's atmosphere is rarefied by heat from the sun's rays, and ascends until an equilibrium is produced by its mingling with the upper, cold strata of the cloud regions: the colder air rushing in and supplying its place. The noxious gases from the earth's surface, diffused in those warm, humid accumulations, are re-arranged when the gases with which they are mingled assume their distinctive positions or characteristics, and the charm of nature is dissolved in the refreshing rainfall; while the noxious elements vent their "fiery spume" in the lightning's flash and the thunder's roll; "dissolving" to again unite with the surrounding elements, and again perform the eternal rounds of collection and diffusion as per the universal laboratory of the universe.

Aside from the electrical display wherein does not that grand exhibition of nature's process of purification faithfully illustrate the more humble process by which the domiciles of our generous workers of the apiary may be freed from the noxious gas incidental to the surroundings of all animate life in domesticity? especially such surroundings as the compulsory confinement which bees wintered in our Northern climate must necessarily be subjected to.

I do not claim that lower ventilation is the only outlet desirable or needed to free the bee-hive from the foul accumulations emanating from the exhalations of its inmates; whether respiratory or by transpiration, I would not have a reservoir of impure air in the lower portions of the brood-nest. Let us see: The paragraph alluded to in Mr. Corneil's critique, reads as follows: "When in a semi-dormant state the denizens of the hive require but little oxygen to support life or neutralize any harmful effects resulting from the accumulation of carbonic-acid gas in their surroundings." If there is anything in that sentence unrealistic or inapplicable to a cluster of bees in winter repose, I have been, as yet, unable to discover it. The next sentence reads: "As this gas, when occupying space in quantities detrimental to animal life, moves earthward, it is easy to comprehend how readily the inside of a bee-hive may be freed from its bad effects by proper downward ventilation, accompanied by an imperceptible upward ventilation, *i. e.*, an upward ventilation not strong enough to produce a rapid current of cold air through or around the cluster."

I did not intend to advance the idea that the gaseous accumulations would sink to the bottom of the hive and roll out! But, by giving the proper ventilation at the entrance, and a slight ventilation over the brood-nest, a gentle circulation of pure air inside of the hive would be continuous. Such an arrangement, if I am correct, would be consistent with natural laws govening the circulation of aerial fluids, *i. e.*, as the air becomes warmed and viciated by the bees, pure, cold air from the outside would pass in at the entrance, and a portion of the impure air in the lower portion of the brood-chamber would pass out at the same opening; thus forming a gentle flow of continuous supply and exhaust.

On opening the outside entrance to a lighted and heated room on a frosty winter evening, the process of aerial circulation may be readily observed by a person standing outside, as the heated, humid air rushes through the upper portion of the door-way, sparkling, into the freezing atmosphere, and the cold air from without moves in to fill its place through the lower portion of the door-way. Right here is the germ contained in Mr. Clarke's "Ariadnean clew;" the basis of hibernation, or hibernal requirements.

This, I think, sufficiently elucidates the import of the criticized paragraph; and if I construe the language of Mr. Corneil's critique correctly, his illustration as fully delineates its meaning as I have done. But enough. "Too much dispute puts truth to flight."

Cumberland, ♀ Maine, Dec. 8, 1884.

Local Convention Directory.

Time and place of Meeting.

Dec. 27.—Union, at Stuart, Iowa.
M. E. Darby, Sec.

1885.
Jan. 6.—Southern Wisconsin, at Janesville, Wis.
J. T. Pomeroy, Sec.

Jan. 14.—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

Jan. 20, 21.—N. W. Illinois, at Freeport, Ills.
Jonathan Stewart, Sec.

Jan. 21—23.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec.

Jan. 22, 23.—Indiana State, at Indianapolis, Ind.
Frank L. Dougberty, Sec.

Feb. 24,-26.—International, at New Orleans, La.

May 28.—N. Mich. Picnic, near McBride, Mich.
F. A. Palmer, Sec.

June 19.—Willamette Valley, at La Fayette, Oreg.
E. J. Hadley, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

☞ The eighth annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Temperance Hall, at Freeport, Ill., on Jan. 20 and 21, 1885.

Jonathan Stewart, *Sec.*

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Rules for this Department.

1. Give your name and post-office address.
2. Be brief, and to the point.
3. Send no simple questions, such as are answered in the bee-books.
4. Ask only such questions as are of general interest.
5. This department is not intended for advertising any one's wares — therefore questions concerning the manufacture of goods for sale are not appropriate.
6. Direct all questions to the editor—

THOS. G. NEWMAN,
925 West Madison St., CHICAGO, ILL.

Sundry Queries.

If I scarify or uncap the honey over the brood, will the bees carry it into the section-boxes? and will the queen lay eggs in the cells from which the honey was taken?

O. P. Crittenden.

Reading, ♀ Mich., Dec. 7, 1884.

Answer.—Yes if you do it at a time when the bees are crowding the brood department with brood; but if on the other hand it is during a time when the honey-flow is excessive, and the bees are inclined to load down the brood-combs with honey, they will recap the scarified cells. You will find the German bees more inclined to carry up the honey than Italians of any strain, I think.

Bees Uneasy.

I have two colonies in the cellar under my kitchen; one is an Italian colony and the other is a colony of blacks. The former is very uneasy; the latter, very quiet. The temperature is about 40° above zero. Would the noise in the kitchen disturb them?

O. McInnes.

London, Ont., Dec. 1, 1884.

Answer.—It has been demonstrated that bees will winter nicely with an anarchy of noise over their heads all winter. It is also quite probable that while such noise is not a cause of bee-diarrhœa, it often is an aggravation to the cause. It seems to me that such is true in your case, for while each colony is subjected alike to noise, temperature, ventilation and humidity, one is very quiet while the other is uneasy. Again we have proof that the wrong condition is within the hive.

Honey-Boards, Section-Cases, etc.

1. Of what advantage is the slat or skeleton honey-board between the brood-frames and section cases? Would the bees not enter the sections more readily if the honey-board were dispensed with and the cases placed directly upon the body of the hive?

2. Where the cases set flat upon the hives, without beveled edges on either to keep them in place, is there not

danger of the cases blowing off? What objection is there to beveled edges or projections, or one or the other, to keep hives and cases together, and to prevent rain from driving in?

3. Will winter feeding disturb the bees so as to induce breeding or cause uneasiness or excitement resulting in bee-diarrhœa? J. W. GORDON.

Brighton, Ont., Dec. 5, 1884.

ANSWERS.—1. When I devised that honey-board I knew that such a board between the brood-chamber and the surplus comb-honey department was a thing of great convenience, and that between the brood-chamber and surplus extracting frames, almost a necessity. I was not sure, however, that the board would not sometimes somewhat deter the bees from entering the sections, and this is one of the reasons why I constructed it so that the cases fit the hive as perfectly without the honey-board as with it. Years of experiment on a large scale have demonstrated to others and to myself that the board has not the least tendency to dissuade the bees from entering the surplus department as soon as the heat and nectar will admit of their entering such department with any other arrangement. The advantages of the slat, sink honey-board are these: 1. It keeps all the brace-combs below it and away from the sections, keeping them clear of these dripping bits of comb. 2. It thus greatly facilitates the easy and speedy removal or adjusting of the surplus arrangements. 3. When running for extracted honey no bits of comb ever rest the frames at their bottoms, thus destroying their rest at their tops, which makes a host of trouble. 4. It tends to keep the queen in the lower apartment. 5. If reversed in the fall, and covered with cloth, it gives a bee-passage over the combs, prevents the cloth from being gummed, and forms a bottom to the case or super holding the absorbing material, so the same may be put off or on without any danger of scattering the contents. 6. It is a protection against robber bees when removing surplus departments.

2. No, there is no danger whatever of the cases blowing off, nor of the rain beating in, where the hives and cases are properly managed (I never have any trouble from either); and if you allow of any such bevel or projections, it greatly increases the difficulty of quickly adjusting them, as it spoils a perfect "lateral movement"—the best of all movements with which to adjust one section or story of a hive to another. It is not only a damage but an extra expense, and entirely uncalled for.

3. Sometimes it will. If you are feeding bees with pure, cane sugar syrup, which are occupying combs containing no bee-bread, I will warrant that no breeding nor bee-diarrhœa will result.

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☞ The Monthly BEE JOURNAL for a year and the pamphlet "Bees and Honey," will both be sent for $1.

SELECTIONS FROM OUR LETTER BOX

Boards in Front of Entrances.

In referring to my proposed plan of wintering, given on page 743, Mr. Chas. Mitchell says that I should "tack each board at the top edge against each hive, or the snow will freeze to them and keep melting on the ground so that in two or three days the boards will be leaning back and form a complete 'shoot' to catch fresh snow and fill the entrances." In reply I would say that these leaning boards used to keep the snow and wind from the entrances of the hives, rest on the bottom-board of the hive and not on the ground as he supposes; hence they are never drawn back as he speaks of; or at least, after using them for two years, I have never seen one do so. G. M. DOOLITTLE 40-80

Borodino, ⊙ N. Y., Dec. 8, 1884.

Is Honey-Dew Poisonous?

Will Dr. Tinker please say whether honey-dew is poisonous or not? Will it cause death or insanity? G.

[I have had no experience with the so-called honey-dew, and know little of it, except what has appeared in the bee-papers. If reference is had to any properties that the bees may convey to it, I should say that it would affect a person no different than other sweets usually stored by the bees.—DR. TINKER.]

Hives Packed in Sawdust.

On May 1, 1884, I bought 7 colonies of bees in box-hives, transferred them to Quinby's improved hive, and increased them to 11 colonies. I have taken from the same 420 pounds of comb honey in one-pound sections, 264 pounds of it being white clover, and the balance gathered from goldenrod and buckwheat. My bees are on the summer stands packed in sawdust, with 6 inches of the same on top, with upper and lower ventilation, and with 40 pounds of honey and bees by weight of frames. I allowed 10 pounds for bees and frames.

C. R. HANCOCK.

Chatham, Ont., Dec. 4, 1884.

Honey-Flora of Middle Tennessee.

The following is a list of the honey-producing plants, and the dates of their blooming in succession, in Middle Tennessee, 36° north latitude: During the latter part of February, white elm, alder and maple; March 1, box-elder; April 10, peach, pear and service; April 15, beech and sugar-tree; April 18, red-bud or Judas-tree; May 5, wild-cherry, raspberry and strawberry; May 10, poplar (the best of all); May 15, white clover and black locust; June 1, persimmon, black-gum and motherwort; June 5, orchard-grass (for pollen); June 12, yellow or shittim wood; June 20, linden or basswood; June 25, chestnut and sour-wood; July 1, melilot clover, catnip and motherwort; July 25, spider-plant; August 1, sumac and prickly-ash; August 10, heart's-ease; Sept. 1, goldenrod, flea-mint, iron-weed, boneset and asters.

D. S. ENGLAND.

Sparta, ⊙ Tenn., Dec. 6, 1884.

Report of the Buckhorn Apiary.

In the fall of 1883 I put 78 colonies into my bee-cellar, and all came out alive last spring. During the past season they have increased to 137 colonies by natural swarming, and I have them all in the cellar again in good condition. I have obtained 2,000 lbs. of comb honey and 2,000 lbs. of extracted honey, and I have about half of it left. F. A. GIBSON.

Racine, ∽ Wis., Dec. 10, 1884.

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That Adulterated Honey.

Concerning the article of Mr. Hunt, on page 787 of last week's JOURNAL, we have the following from Mr. Von Dorn:

OMAHA, Neb., Dec. 6, 1884.—In reply to Mr. Hunt's article: 1. I know of no one who wishes him to go out of the bee-business. It is the adulteration business we are after, and we do not propose to let it up either.

2. He may have all the legal proof he needs as to the identity of the honey; I have it.

3. It is presumable that the Chicago Sugar Refining Company (one of the largest glucose works in the United States) knows what glucose is, and how to detect it. Prof. Nicholson, the chemist at the Nebraska State University, says: "I find neither starch nor paraffine, and *believe* (italics mine) the article to be pure strained honey." He *believes;* the Refining Company *knows.* Paraffine in honey is good; no wonder he believes. I proposed to have proof one way or the other before I told the public what it was.

4. I neither know nor care now who that queen-breeder was. It is of no importance to this case. If it was I who made any remarks, I presume I can furnish satisfactory proof in support of them.

5. I have no personal ill-will in the least, and if he can convince me that I am in the wrong, I will do more to right him than I have to hunt him down. T. L. VON DORN.

The readers of the BEE JOURNAL are not interested in a personal controversy, and with the exception of the result of the third analysis (if offered for publication) this article will close this subject in our columns. All we desire is to get at the facts of the case, and these, so far, are contradictory, and, therefore, unsatisfactory. What the next will be we do not know.

The Bee Journal for 1885.

Premiums, $25.00 in Cash.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

All former offers of Premiums are now withdrawn.

The price of the Weekly BEE JOURNAL for 1885 is $2.00 for one copy; $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

We have decided to publish the Monthly BEE JOURNAL for next year of the same size and shape as the Weekly, (which contains about the same amount of reading matter as the present Monthly,) at 50 cents a year; two copies (to the same or different post-offices) for 90 cents; three copies for $1.30; four copies for $1.70; five copies for $2.00; more than five copies for 40 cents each. The time has been extended on all portions of next year, which have been paid for at the rate of $1.00.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 25
" 200 colonies (420 pages)...... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

☞ The new Monthly for January will be issued this week, and the many sample copies already ordered will then be sent. We send samples free to all who wish them, or desire to get up Clubs. Now is the time to work for the Cash premiums we offer. A large club for the Monthly can be gotten up in almost every locality.

Create a Local Honey Market.

Now is the time to create Honey Markets in every village, town and city. Wide-awake honey producers should get the Leaflets "Why eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully all over the territory they can supply with honey, and the result will be a *demand* that will readily take all of their crops at remunerative prices. The prices for "Honey as Food and Medicine" are as follows:

Single copy **5** cts.; per doz., **40** cts.; per hundred, **$2.50**. **500** will be sent postpaid for **$10.00**; or **1000** for **$15.00**. On orders of **100** or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ To give away a copy of "Honey as Food and Medicine" *to every one who buys a package of honey*, will sell almost any quantity of it.

Premium for Club of 10 Subscribers.

The book for every farmer is the one entitled "Affleck's Farmer's and Planter's Record and Account Book," in which there is the most systematic, complete and convenient arrangement of headings for every Farm Account and memoranda of all important events which may occur in connection with his business. Every progressive farmer certainly desires to make a success of his occupation, and should adopt every possible means of bringing about that result. He, then, should have a correct knowledge of his entire business, which he can have only by keeping a correct account of every crop produced on his farm, the cost of production of all his live stock and an itemized account of all his expenses. Then at the close of the year, when he takes off his balance sheet, which is admirably arranged in the book above referred to, he will be able to see at a glance whether his farm does or does not pay.

This valuable book contains 166 pages, is nicely printed on writing paper, ruled and bound, and the price is $3.00. It can be sent by mail for 24 cents extra.

We can supply these books at the publisher's price, or will make a **present** of one copy for every club of TEN subscribers to the Weekly BEE JOURNAL for one year, with $20. Four subscribers to the Monthly will count the same as one for the Weekly.

Now is the time to get up Clubs. Who will work for a copy of this valuable book?

☞ For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail postpaid.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Dec. 15, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Comb honey has been taken with freedom by the trade this week, but 15@16c. is the best price obtainable for a fancy article of comb honey in frames. Some lots bring from 14 to 15c. when in good order. Stock of comb honey is not large at present. Extracted, 7@8c. for new.

BEESWAX.—For fair to yellow, 28@30c.

R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The market is well stocked with honey which is in good demand at the following prices: Fancy white comb in 1-lb. sections, 18@20c.; the same in 2-lb sections, 16@18c.; fair to good white comb in 1 and 2-lb. sections, 14@16c.; fancy buckwheat comb in 1-lb. sections, 12@13c.; same in 2-lb. sections, 11@11½c.; ordinary buckwheat comb in 2-lb. sections, 9@10c. Extracted, white clover in kegs or small barrels, 6½@8c.

BEESWAX.—Prime yellow, 30@31c.

MCCAUL & HILDRETH, 34 Hudson St.

CINCINNATI.

HONEY.—There is an unsatisfactory demand for extracted honey from manufacturers, while there is a fair inquiry for small packages of clover honey such as dime, ¼-lb., 1-lb., and 2-lb. jars, from the retail trade. Prices are low as arrivals exceed the demand. Extracted honey brings 5@9c. on arrival; choice white comb honey is in fair demand and sells best in 1-lb. sections. It brings 15@16c. in the jobbing way. We have several small lots of dark comb honey from parties in Illinois, and offered it as low as 10 and 11 cents per lb. without finding a buyer. Dealers most certainly mislead producers by quoting buckwheat and poplar comb honey, if they are not more successful than we are in disposing of the same.

BEESWAX.—The demand is slow and arrivals are few. Good yellow brings 26@27c. on arrival.

C. F. MUTH, Freeman & Central Ave.

SAN FRANCISCO.

HONEY.—Stocks of combs are larger and include some of choice quality. Supplies of extracted are liberal, and prices are fully as much in buyers' favor, as at any time during the season.

White to extra white comb, 9@10c.; dark to good, 4@8c. Extracted, choice to extra white, 3¾@4¼c.; dark and candied, 3@3½c.

BEESWAX.—Wholesale, 24@27c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@6½c.

BEESWAX—Firm at 32@32¼c. for choice.

W. T. ANDERSON & Co., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

GEO. W. MEADE & Co., 213 Market.

KANSAS CITY.

HONEY.—The market is quiet and unchanged, with good demand and liberal receipts. Comb, ½-lb. sections, none in the market. They would bring 18c.; 1-lbs., 14@16c.; 2lbs., 13@14c. The above figures are for choice stock in regular shipping crates. Dark or large combs in rough crates sell slowly at 9 to 10c. Extracted, California, 6@7c.; white clover, 7@8c.; Southern, 5½@6c.

BEESWAX.—None in the market.

CLEMONS, CLOON & Co.
Successors to Jerome Twichell.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

We have had some bound in Russia leather, with colored edges—price 60 cents.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

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THE VOLTAIC BELT CO., of Marshall, Mich., offer to send their celebrated ELECTRO-VOLTAIC BELT and other ELECTRIC APPLIANCES on trial for thirty days, to men (young or old) afflicted with nervous debility, loss of vitality and manhood, and all kindred troubles. Also for rheumatism, neuralgia, paralysis, and many other diseases. Complete restoration to health, vigor and manhood guaranteed. No risk is incurred, as thirty days trial is allowed. Write them at once for illustrated pamphlet free. 6D1y

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Successors to A. E. Manum, Bristol, Vermont,
MANUFACTURERS OF

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Hives, Sections, Shipping Crates, &c.

White Poplar Sections a specialty in quality and accuracy. Send for Illustrated Catalogue and Price List. 50A12t

SEND FOR IT.

We have just issued a new four-page circular that will interest any bee-keeper. Send your name on a postal card for it.
44Atf HENRY ALLEY, Wenham, Mass.

WIN more money than at anything else by taking an agency for the best selling book out. Beginners succeed grandly. None fail. Terms free. HALLETT BOOK CO.
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HELP for working people. Send 10 cents postage, and we will mail you *free*, a royal, valuable sample box of goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. You can live at home and work in spare time only, or all the time. All of both sexes, of all ages, grandly successful. 50 cents to $5 easily earned every evening. That all who want work may test the business, we make this unparalleled offer: To all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Immense pay absolutely sure for all who start at once. Don't delay. Address STINSON & CO.
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$200,000 *in presents given away.* Send us 5 cents postage, and by mail you will get *free* a package of goods of large value, that will start you in work that will at once bring you in money faster than anything else in America. All about the $200,000 in presents with each box. Agents wanted everywhere, of either sex, of all ages, for all the time, or spare time only, to work for us at their own homes. Fortunes for all workers absolutely assured. Don't delay. H. HALLETT & CO.
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To every person who sends us one NEW subscription, (besides his own renewal), for one year, for the Weekly BEE JOURNAL, or 4 NEW Monthly subscribers, for a year, we will send as a present, by mail, postpaid, a copy of "Mistletoe Memories, or What the Poets say about Christmas."

MISTLETOE
OR WHAT THE POETS SAY ABOUT CHRISTMAS
MEMORIES

It comprises a collection of poems selected from the writings of H. W. Longfellow, J. G. Whittier, Thomas Hood, Alfred Domett, Chas. Mackay, Sir Walter Scott, Jennie Joy, and others. The whole bound in Banner shape, with rich silk fringe and tassels. For presentation, this art souvenir is vastly superior to a mere Christmas card, as it combines the advantages of both art and literature. Size, 4 by 6½ inches.

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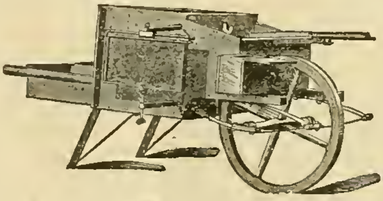

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The BRITISH BEE JOURNAL is published SEMI-MONTHLY, at Seven Shillings per annum, and contains the best practical information for the time being, showing what to do, and when and how to do it. **Rev. H. R. PEEL, Editor.**
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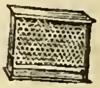

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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$66 a week at home. $5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to H. HALLETT & CO., Portland, Maine.
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For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

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GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to $5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address STINSON & CO., Portland, Maine. 4A1y

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Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

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BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

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It contains 220 profusely illustrated pages, is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the Honey-Bee, and at the same time produce the most honey in its best and most attractive condition.

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37A1y

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It makes the finest extra thin Foundation for comb honey. For Sale by

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We sold thousands of the Traps last season. Enterprising supply dealers will find the Traps the best paying article they can deal in. Circulars ready. **HENRY ALLEY,**
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46A26t

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"BOSS" ONE-PIECE

SECTIONS.

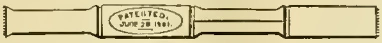
READ THIS.

A word of explanation in regard to the infringement suit on the One-Piece Section, we deem necessary at this time.

I commenced suit against A. I. Root, in the United States Circuit Court, for the Northern district of Ohio; Stanley Matthews presiding. He decided that the patent was void for want of novelty. I have taken an appeal to the United States Supreme Court at Washington, which will decide the case, and its decision will be final. If it goes against me I will submit, but if decided in my favor, I shall expect all who have infringed will pay me damages from date of the patent.

Some unprincipled parties are advertising that the Courts have decided that the patent is void. This is not the case, as it is before the United States Supreme Court at Washington, at the present time. When that Court gives its opinion it will be final, and until it does, any one infringing will be liable for damages, if the United States Supreme Court sustains the patent.

PRICES OF SECTIONS.



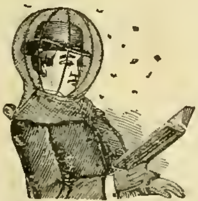
One-lb. Sections in lots of		500 to 4,000	$5.00
Ditto	Ditto	5,000 to 10,000	4.75
Ditto	Ditto	10,000 to 25,000	4.50
Ditto	Ditto	25,000 to 50,000	4.25
Ditto	Ditto	100,000 or more	4.00

The one-lb. Section is 17 inches long. For any sizes between 17 and 20 inches in length, add 5 per cent. For any sizes between 20 and 24 inches, add 10 per cent. Add the above per centage to the price of one-lb. Sections in the same quantity.

J. FORNCROOK & CO.,

50A^stBCtf Watertown, Wis., Dec. 1, 1884.

A NEW BEE-VEIL.



There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. Price, by Mail or Express, $1.00.

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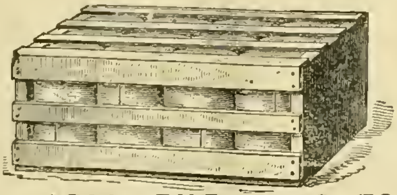

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is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

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Restoring the Drowned,
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Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
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Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

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Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
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For Comb Foundation for 1885.

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NOW

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Write and get my present low terms. I pay highest market price in

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No other bees kept in the field. House, barn and honey-house, good cellar, cistern, and two wells; high-board fence all on ½ acre of ground in a small village, 6 miles from here, on this M. C. R. R. Depot, freight, express and telegraph offices, saw-mill, store and blacksmith shop only 25 rods distant.

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I will give my purchaser a splendid opportunity to gain a good home, and choice honey location. I will sell with it any number of colonies of bees and apiarian fixtures wanted, the outfit being either for comb or extracted honey as desired; or I will sell only the home and permanent fixtures, and furnish a large number of colonies on shares till the purchaser thus gains stock of his own. Hives and fixtures of my latest improved patterns. Write me for prices, terms, etc.

HIVES IN THE FLAT,

OR MADE UP COMPLETE,

Either for Comb or Extracted Honey, cheaper than many can procure material at home. Write for special prices in quantity, and state the number wanted.

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INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,

Honey and Wax Extractors, Comb Foundation, Kegs and Pails for Honey, Seeds for Honey Plants, etc.,

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Illustrated Catalogue sent free upon application.

I pay **25c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

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King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
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Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
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2 50	" Every Other Saturday, *Lit.*	s-m	4 10
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1 50	" Farmers' Review	w	3 20
1 00	" Herald, *Independent*	w	2 85
1 00	" Inter-Ocean, *Republican*	w	3 00
2 50	" " "	s-w	4 40
2 50	" Religio-Phil. Jour., *Spirit.*	w	4 10
2 00	" Skandinaven, *Swedish*	w	3 85
2 00	" Staats-Zeitung, *German*	w	3 80
2 25	" Svenska Tribunen, *Swed*	w	4 00
2 50	" Standard, *Baptist*	w	4 35
1 25	" Times, *Democratic*	w	3 20
1 00	Cincinnati Times-Star, *Ind*	w	3 00
1 15	" Enquirer, *Democratic*	w	3 15
1 25	" Gazette, *Republican*	w	3 05
1 00	Detroit Free Press, *Family & Lit*	w	3 00
1 00	Kansas City Journal, *Republican*	w	3 00
1 00	" Times, *Democratic*	w	3 00
1 50	Louisville Courier Journal, *Dem*	w	3 30
2 00	Milwaukee Peck's Sun, *Humor*	w	3 85
1 50	New York Am. Agriculturist	m	3 10
4 00	" Art Amateur	m	5 25
1 50	" Christian Herald, *Ills*	w	3 20
4 00	" Century, *Literary*	m	5 70
2 00	" Demorest, *Ladies*	m	3 70
1 75	" Golden Argosy, *Lit*	w	3 25
2 50	" Graphic, *Illustrated*	w	4 00
4 00	" Harpers' Weekly, *Illus*	w	5 40
2 50	" Leslie's Sunday Mag	m	4 20
5 00	" North Amer. Review	m	6 30
2 00	" Phrenological Journal	m	3 75
2 00	" Rural New Yorker	w	3 85
2 20	" Scientific American	w	4 95
1 00	" Times, *Ind. Republican*	w	3 00
1 25	" Tribune, *Republican*	w	3 10
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2 00	Philadelphia Call, *Lit. & Humor*	w	4 00
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2 00	" Peterson's Magazine	m	3 60
2 00	" Practical Farmer	w	3 25
1 00	" Press, *Republican*	w	3 00
1 50	Washington National Tribune	w	3 00

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925 West Madison Street **Chicago, Ill.**

OLDEST BEE PAPER IN AMERICA

THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861. Chicago, Ill., December 24, 1884. VOL. XX.—No. 52.

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925 WEST MADISON-STREET, CHICAGO, ILL.
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TO CORRESPONDENTS.

The Subscription Price of the Weekly BEE JOURNAL is **$2.00** a year; and of the Monthly, **50 cents** a year in advance. New Subscriptions can begin at any time. Single Copies, five cents each.

Club Rates for the Weekly are: $3.80 for two copies (to the same or different post-offices); $5.50 for three copies; $7.20 for four copies; and for five or more copies, $1.75 each.

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Sending Money.—Remit by Express, Post Office Order, Postal Note, or Bank Draft on New York or Chicago. If neither of these can be obtained, Register your Letter, affixing stamps both for postage and registry, and take a receipt for it; or send it by Express. Money, sent as above described, is AT OUR RISK, otherwise, it is not. Do not send checks on local banks, which cost us 25 cents each, at the banks here, to get them cashed.

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Lost Numbers.—We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails, we will cheerfully replace them if notified before all the edition is exhausted.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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☞ Our rates for two or more copies of the book, "Bees and Honey," may be found on the Book List on the second page of this paper. Also wholesale rates on all books where they are purchased "to sell again." The time for reading up will soon be here, and in anticipation of this, we now have a very large stock of books on hand, and can fill orders for them in any quantity, on receipt of orders.

ADVERTISING RATES.

20 cents per line of space, each insertion.

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A line of this type will admit about **7** words. ONE INCH will contain TWELVE lines.

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TO CORRESPONDENTS.

Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

Always give the name of the Post-Office to which your paper is addressed. Your name cannot be found on our List, unless this is done.

Emerson Binders, made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents each. They cannot be sent by mail to Canada.

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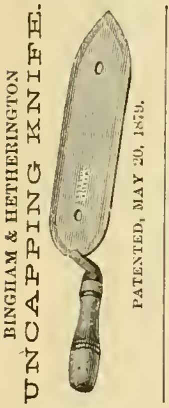

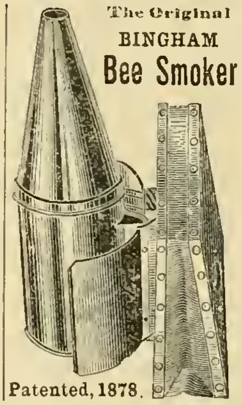

Prof. Cook, in his valuable Manual of the Apiary, states that "Mr. Bingham was the first to improve the old Quinby smoker by establishing a direct draft." Five years of persistent effort has demonstrated that no one but Bingham has been able to improve a Bingham smoker. Hundreds of Bingham smokers have been in use five years, and are yet in working order. They burn lots of blocks and chips and stuff, and make lots of smoke and comfort, and have no dampers or match-box attachments, as they never go out or fail to blow smoke up or down or sideways, much or little, swift or slow, just as you please, any or all the time; top up or down, they always go!

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On dozen or half-dozen lots of one kind, we allow 25 per cent. discount, and prepay postage. Special rates on larger quantities, given upon application.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by THOMAS G. NEWMAN.—It is "fully up with the times," in all the various improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. It embraces the following subjects: Ancient History of Bees and Honey—Locating an Apiary—Transferring—Feeding—Swarming—Dividing—Extracting—Queen Rearing—Introducing Queens—Italianizing—Bee Pasturage a Necessity—Quieting and Handling Bees—The Management of Bees and Honey at Fairs—Marketing Honey, etc. 220 profusely-illustrated pages. Price, bound in **cloth, $1.00;** 2 copies for $1.80; 3 copies for $2.55; 5 for $4.00; 10 for $7.50. **Paper covers, 75** cents; 2 copies for $1.40; 3 copies for $2.00; 5 for $3.00; 10 for $5.00.

The Apiary Register, by THOMAS G. NEWMAN.—A Record and Account Book for the Apiary, devoting 2 pages to each colony, ruled and printed, and is so arranged that a mere glance will give its complete history. Strongly bound in full leather. Price, for 50 colonies, **$1.00;** for 100 colonies, **$1.25;** for 200 colonies, **$1.50.**

Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the **English** or **German** edition, 5 cents—one dozen, **40** cents—100 for **$2.50**—500 for **$10.00**—1,000 for **$15.00.**—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premium for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, **50** cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, **50** cents per 100; 500 copies for **$2.25;** 1,000 copies for **$4.00.** When 200 or more are ordered at one time, we will print the honey-producer's name and address FREE, at the bottom.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. This is a chapter from "Bees and Honey." Price, **10c.**

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by THOMAS G. NEWMAN. A chapter from "Bees and Honey." Price **5c.**

Bee Pasturage a Necessity, by THOMAS G. NEWMAN—Progressive views on this important subject; suggesting what and how to plant.—A chapter from "Bees and Honey." 26 engravings. Price, **10c.**

Bees in Winter, by THOMAS G. NEWMAN.—Describing Chaff-packing, Cellars and Bee-Houses. A chapter from "Bees and Honey." Price **5c.**

Bienen Kultur, by THOMAS G. NEWMAN.—In the **German** language. Price, in paper covers, **40** cents, or **$3** per doz.

Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, **$1.25.**

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, **$1.50.**

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, **$1.25;** paper, **$1.**

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Price, **75c.**

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—This is the work of a master, and will always remain a standard. Price, **$2.00.**

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Queen-Rearing, by HENRY ALLEY.—A full and detailed account of 23 years experience in rearing Queen Bees. The cheapest, easiest and best way of rearing. Price, **$1.**

Bee-Keepers' Text Book, by A. J. KING.—A new edition, revised and enlarged. Price, **$1.00,** bound in cloth.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, **15c.**

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, **10c.**

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, **15c.**

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, **50c.**

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price **5c.**

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, **25c.**

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, **$2.50.**

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, **25c.,** in either **English** or **German.**

Food Adulteration.—What we eat and should not eat. This book should be in every family. Price, **50c.**

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, **35c.**

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, **40c.**

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, **25c.**

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. **75c.** for the Weekly; or for the Monthly, **50c.** They cannot be sent by mail to Canada.

Constitution and By-Laws, for local Associations, $2 per 100. The name of the Association printed in the blanks **50c.** extra.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, **10c.** each, or $8 per 100.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price **25c.**

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX. CHICAGO, ILL., DECEMBER 24, 1884. No. 52.

AMERICAN
ESTABLISHED IN 1861
OLDEST BEE PAPER IN AMERICA
BEE JOURNAL

THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

VOLUME XX ENDED.

With this number—the fifty-second for 1884—ends the 20th Volume of the Weekly BEE JOURNAL.

Nearly all of the subscriptions run out with this issue, and we would respectfully request such readers and patrons to sit down as soon as this article is read and send us the renewal of his or her subscription for 1885, and thus prevent the loss of a number and the consequent pleasure of the weekly feast it presents.

We are grateful for past favors, and we confidently look for an increased support by progressive bee-keepers everywhere, in order to enable the BEE JOURNAL to retain the proud position of being *the best*, as well as the oldest bee-paper on the American Continent. The BEE JOURNAL and its able corps of correspondents have contributed their full share in all the advance-steps of modern improvements in bee-culture, and it has kept its readers fully posted in the development of every one of such, as fast as they have attained a foot-hold.

We will close the present Volume by wishing all our readers

A MERRY CHRISTMAS
AND A HAPPY NEW YEAR.

◆

☞ Every subscriber is kindly invited to obtain a *new* subscriber to send with his renewal. Please notice the premiums offered for clubs, on another page.

Honey and Beeswax.

In the United States Census for 1880, we find the following Table showing the production of honey and beeswax for the year 1879.

	Honey.	Beeswax.
Alabama	841,535	66,876
Arizona	650	10
Arkansas	1,012,721	42,354
California	574,029	14,672
Colorado	8,340	96
Connecticut	100,378	3,543
Dakota	6,180	27
Delaware	76,234	2,151
District of Columbia	1,723	133
Florida	211,943	17,976
Georgia	1,056,034	69,318
Idaho	50	......
Illinois	1,310,806	45,640
Indiana	967,581	31,637
Iowa	1,310,138	39,565
Kansas	201,034	6,951
Kentucky	1,500,565	46,912
Louisiana	168,441	11,736
Maine	198,499	4,770
Maryland	283,752	7,722
Massachusetts	49,397	2,463
Michigan	1,028,595	32,088
Minnesota	234,054	6,552
Mississippi	382,560	24,249
Missouri	721,080	45,462
Nebraska	86,645	1,828
Nevada	24,296	60
New Hampshire	87,886	2,856
New Jersey	131,342	6,145
New Mexico	450	5
New York	2,088,845	79,756
North Carolina	1,591,590	126,268
Ohio	1,626,847	56,333
Oregon	122,348	3,444
Pennsylvania	1,415,093	46,610
Rhode Island	8,397	536
South Carolina	354,350	26,780
Tennessee	2,130,689	86,421
Texas	761,225	35,825
Utah	87,331	1,546
Vermont	221,729	4,574
Virginia	1,090,451	53,200
Washington	20,005	972
West Virginia	833,564	26,667
Wisconsin	813,806	22,960

It will be interesting to put this Table on record; though we do not think it complete, by any means. As proof of this assertion, we have only to compare the third and fourth lines, where we find Arkansas to have produced about double the amount of honey credited to California. It also gives North Carolina credit for 50 per cent. more than Michigan, and more than Illinois or Iowa. The fact is, it is so manifestly incorrect that it is useless.

◆

☞ From an investment of $2.00, every subscriber to the Weekly BEE JOURNAL for 1885, will receive fifty-two dividends.

☞ To the copious indexes found in this number of the BEE JOURNAL we point with pride. Those who bind the volume or use the Emerson Binder, will find it of untold value.

◆

☞ At the World's Exposition, let it be understood, says Dr. Brown, that "all exhibits of colonies of bees and bee manipulations will *only be during the week of the Convention.* Supplies can be exhibited any time during the Exposition."

◆

☞ The long winter evenings will be well occupied by reading bee literature. When renewing your subscription, it will be well to get some good bee-books. See our list of books on the second page and select what you need. Do not forget to send for a Binder in which to file your JOURNAL and thus have the full benefit of it during the whole year.

◆

☞ We had about concluded that the *Kansas Bee-Keeper* had ceased to exist, as it had not been published since September. We now learn that the cause was the illness of both of its editors, Messrs. Scovell and Pond.—They now propose to issue it weekly and thus make amends for lost time.

◆

☞ As there are fifty-three Wednesdays in this year, and as we are behind with this number, with two legal holidays for the employes before us, the next issue of the Weekly BEE JOURNAL, for January 7, will be mailed on the previous Saturday, and after that, it will be mailed, as usual, every Tuesday.

◆

☞ Please notice the change of the club rate for the *Apiculturist*, as noted on the last page of this paper.

◆

☞ To Canadian subscribers let us say that we have made arrangements so that we can supply the *Farmer's Advocate* of London, Ont., and the Monthly BEE JOURNAL for one year at $1.25 for the two.

CORRESPONDENCE

For the American Bee Journal.

Keeping Bees on Shares, etc.

CHAS. DADANT & SON.

In reply to the question asked by Mr. T. W. Dougherty, on page 796, which Mr. Heddon answers, allow us to give a report of the different ways in which we do it, and which give satisfaction to all parties.

There are three ways in which we take and give bees on shares, and there are often also three persons involved in the transactions, the owner of the bees, the owner of the location, and the bee-tender or bee-keeper. The bee-keeper who takes bees on shares, usually has some of his own, and it is, therefore, preferable to put them on the premises of a third party. The rule is to give the owner of the bees two-fifths of the surplus, the apiarist gets two-fifths, and the land owner one-fifth. In the bargain it is understood that the latter is to furnish room for the empty hives, boxes, extractors, honey, etc., and board the apiarist and his horses, while at work.

The only risks of loss to be incurred are, that of winter or the absence of a crop. These risks should be incurred by the owner of the bees; that is, he must stand the winter loss, and the expense of feeding the bees if necessary. On the other hand, the apiarist must put the bees in winter quarters as safely as possible, and if there is a crop he must keep enough surplus honey to feed the bees until the next crop. If there is no crop, he must do the work of feeding if needed.

As for the increase of bees: All depends on the manner of it. If swarming by division is intended, the terms depend on the quality of the hives, the amount of comb foundation used, and the more or less purity of the race of bees employed. If natural swarming is the only source of increase, then the increase belongs to the owner of the bees, provided he pays for hiving the swarms; otherwise the apiarist has a right to one-half of the increase, but he must furnish hives, comb foundation, etc., for his share. The price which we pay for hiving swarms is 75 cents per swarm. It would be unreasonable and bad policy to request the apiarist to hive the swarms free of charge, for swarm-hiving is a tedious job, and takes much valuable time. Besides, an apiarist who tends three or four apiaries cannot be expected to hive all the swarms. It becomes the part of the location owner.

Our method, therefore, is as follows: When a man lets bees to an apiarist on the apiarist's land, the owner of the bees gets two-fifths, and the apiarist three-fifths; the owner pays 75 cents for each swarm hived, and furnishes hives, etc., to suit himself, and the swarms are his; or if he pays nothing, each of them gets half of the swarms, and each furnishes his own hives, foundation, etc.

When a man lets bees to a land-owner, and tends the bees himself, he gives one-fifth and pays 75 cents per swarm.

When a man lets bees to an apiarist on a third man's land, he gives the apiarist two-fifths, the land-owner one-fifth, and pays 75 cents for the swarms hived. If the apiarist pays 75 cents, then he gets half of the natural increase.

DOES BEE-KEEPING PAY?

One more word. Messrs. Doolittle and Heddon claim that bee-keeping does not pay because honey is too cheap, or something to that effect. The great trouble is that they want a man to try a living with 100 to 200 colonies of bees. We say and prove by facts, that a man can keep from 400 to 700 colonies of bees, and keep them properly. Of course additional help is needed during the honey harvest, the hives and implements must be ready before spring, and the colonies must be in running order to start with. We also say and prove by our own experience that extracted honey can be produced at 6 cents per pound and pay its producer. The production of honey has not yet been and cannot be overdone, for the consumption increases as fast as the production, and honey will always be the highest priced of all sweets.

Mr. D. W. McDaniel, of this city, has done the greater part of the work on some 450 colonies of bees for us this summer, and was not busy more than half of the time either.

Hamilton,⊙ Ill., Dec. 12, 1884.

For the American Bee Journal.

Honey as a Staple Article.

H. U. ACKERMAN.

The following from the Indianapolis *Evening News* of Dec. 10, 1884, I should like to have published in the BEE JOURNAL, believing that it will be appreciated. After fighting, for months, the "Prof. Wiley scientific pleasantry" (lie), it is quite refreshing for a bee-keeper to read in a newspaper an article like this, speaking a good word for his pursuit, and I would suggest that bee-keepers generally send a copy of the BEE JOURNAL containing it, to their local papers requesting them to copy it:

HONEY A SUBSTITUTE FOR BUTTER.

"Times are bad and likely to be worse," said a prominent member of the Franklin Institute to a reporter yesterday afternoon. "Butter is becoming scarcer and dearer every year and it will be beyond the reach of poor people this winter. Unless poor people who are out of work find a substitute that is cheaper than butter, they will have to eat their bread dry. They will not eat butterine or oleomargarine; they would turn up their noses at that, if they were starving."

"What can they use, then?"

"I do not know; but if some enterprising man would take hold of the honey question, I believe he would make a fortune."

"Honey?"

"Yes, sir; honey. There is an opinion going around that honey is a luxury. There never was a bigger mistake made. If it does not make much muscle, it gives warmth to the whole system, arouses all the nervous energies and gives vigor to all the vital functions. I can talk about honey because I know about it. I know that most children would rather eat bread and honey than bread and butter, and that a pound of honey will go as far as two of butter. Besides, honey will keep forever and never get sour or rancid like butter does. Then look how much cheaper it is. Honey can be bought at 15 cents and 20 cents a pound, and a fair profit made by the retailer. Butter is seldom less than 40 cents, and this winter it will reach 55 cents a pound. Of course I am only speaking of the best kind of honey. Buckwheat honey, which has a slight flavor, can be retailed at a profit at $1 for 8 pounds. But, Lor' bless you, the people would not eat that. Only the best is good enough for them."

"Could enough honey be brought into the market to substitute it for butter?"

"Well, that is not exactly the question. It is not likely that honey will supersede butter altogether; but just now, when wages are low and butter is getting higher and higher every day, it would be a good thing if people knew that they could buy a good substitute, if it is only a temporary one. What is wanted to make it a paying one is the introduction of the barrel trade. If retail dealers would take their honey in barrels and sell it in small quantities at the rate of about 15 cents a pound, they could make a large profit. You know working people look twice at a quarter before they spend it on what they think is a luxury. But if they thought they could buy 5 or 10 cents worth at a time, they would be glad of it, and they would soon learn that honey is cheaper and preferable to butter. In the winter honey candies and becomes hard enough to cut with a knife and spread like butter, so it can be used in the same way. If a demand for pure honey arose, a hundred barrels could be brought into the city every week all the year round, or a hundred dozen if the demand increased."

"How about adulteration?"

"The principal adulteration is glucose, but it is not difficult to detect. Honey mixed with glucose will not candy at the lowest temperature, whereas pure honey candies very freely. The best way to keep honey is in those five-pound Mason jars. If it candies, so much the better. A little heat will soon liquify it, if that is desired. If people generally knew what a nutritious, wholesome food honey is, it would not be long before the bee-keepers would have all they can do to keep up the supply."

North Indianapolis,⊙ Ind.

For the American Bee Journal.

Bee-Keeping in 1884.

JNO. A. THORNTON, 54—73.

During the past spring my bees were in pretty fair condition, and all except 4 were good colonies. The 4 were weak, and I did not secure any thing at all from them, so I really did not count them as colonies. I obtained 3,200 pounds of honey from the 50 colonies, 1,800 pounds of which was comb honey in one-pound sections (800 pounds of this being clover and basswood honey, and the balance from Spanish-needle and smart-weed); and 1,400 pounds of extracted honey, being mostly of fall honey.

There was some of the bark-louse honey gathered early in the spring, but not enough to amount to much. The flow from clover did not last until July 1; basswood lasted only three days, and then the bees did not gather much from it; so I had to feed some to get the weaker colonies strong enough to gather the fall honey crop, which commenced about Aug. 26 and continued for 6 or 8 days. when it ceased and there was no more gathered; so the bees did not have very much time to gather much surplus, but secured enough to winter on, and nearly all of them stored some surplus; none of them filled a two-story, Langstroth-Simplicity hive.

Honey sells slowly here now, and is not much in demand; 13 and 15 cents is the most I can get for comb honey in one-pound sections; for extracted, 10 cents per pound at retail; and then most of the people seem to think this too high, and will buy only a few pounds at a time.

The black bees did not secure any surplus at all in this neighborhood, but the majority of them stored enough to winter on. Some of my neighbors, who have black bees, seem to think that they are a poor investment, and are killing them for what honey there is in their hives. The Italian bees produced by far the most honey this year. In 1883 I had some colonies of hybrids, each of which stored 275 pounds of honey, being 50 or 60 pounds more than any full colony of Italians gathered; but this year none of them gathered as much, and they did not fill sections as full as the Italian colonies did. I cannot see wherein hybrids are so much superior to the Italians, as some bee-keepers claim them to be; they are hard to handle, and will not stick to the combs; and worse yet, they are more likely to sting; but I consider them far superior to the blacks.

Some may think that I have poor colonies to breed from, but this is not so, for the queens are from the best imported and home-bred queens, and only the best are allowed to become laying queens. Some colonies of hybrids are as gentle to handle as some Italians, during a honey-flow; but when the flow ceases, look out! for if they cannot sting you, they will follow you for a long while; and then they are worse robbers than any others.

Yesterday and the day before were nice days, and the bees were out in full force, having a good "fly." I have never tried to winter bees any where else except on the summer stands, and I have had good success. In the fall of 1882, 23 colonies were prepared, and all wintered without loss; in the fall of 1883, 54 colonies were left on the summer stands and came out all right. The way they were prepared was with straw packed around them and tied with strings on 3 sides, with covers made of shingles, and the fronts of the hives were not covered, and faced the south; three half-inch sticks were put crosswise of the frames on top, with covers made of muslin, painted, which is almost the same as oil-cloth. This is the best cover I ever tried for summer use, but I do not like it for winter use. I use the 10-frame, Langstroth-Simplicity hive.

I asked a bee-keeper, who has black bees, how many colonies he had, and this is the way he answered me: "Well, I do not know, but I can count them. There are 3 under the cedar; one of them the moths ate up; 3 under the big pine, is 5; 2 under the box-alder, is 7; 2 under the little cedar, is 9; 2 by the fence, is 11; 2 under the little pine, is 13; 1 over in the corner, is 14; and one in a log, is 15; and one more is 16. Now, I will give you 4 colonies for enough honey to winter the rest on. Four have starved, I killed 6, and got about 6 lbs. of honey, and I would like to winter the rest and try them another year."

But I did not bargain for the 4 colonies, as I did not like the investment.

Lima, Ill., Dec. 5, 1884.

* * *

For the American Bee Journal.

Wintering Bees, Swarm-Catcher, etc.

R. GRADEN.

I have procured several colonies of bees at different times, and always lost them in various ways, still I would not give up, as I have quite a liking for bees. Every time that I lost bees I examined the contents of the hive to ascertain, if possible, the cause; yet I had the courage to try again.

After 3 or 4 years of losing bees, I decided upon a course by which I would not lose them in any of the former ways; so I proceeded to a neighbor who kept some bees in box-hives, and who never pays any attention to them except when they swarm, when he takes an old box of any kind, or an old nail-keg or cheese-box, and makes a hole in it large enough to admit of a fist, and then with the aid of a 20-foot pole he manages to dump the bees into it, sets them up against the fence, and does nothing more to them until the next swarming season, should they be fortunate enough to winter. I told my neighbor that I wanted to get another swarm of bees, the first that should issue, as it was then about July 10, 1882, and he should put them into a good box-hive, which he did about the last of July.

I took my bees home and cared for them, and they did well, and before cold weather set in, they filled the box-hive and a small cap holding about 8 pounds of honey. I prepared them as I had decided upon, and they wintered safely.

On May 21 and 22, 1883, snow fell to the depth of 2 inches, but on May 23, the weather cleared up, the snow thawed, and about 2 p. m. my bees swarmed. I hived the swarm and it did well, and on May 31, a second-swarm issued, and on June 3, a third-swarm issued. I increased them to 7 colonies, 5 good and 2 small ones. When cold weather came I prepared 6 colonies as I did the one of the previous year, and one I carried into the cellar, but it died with the diarrhœa about the middle of January 1884. The 6 which were left on the summer stands, wintered safely, but on examination of the weakest, I found that it had exhausted its stores, and the queen and a cluster of bees the size of a small hen's egg, was all that was left in the hive. I immediately fed them sugar syrup, and left them to themselves, as I had no other frames which would fit that hive. They have increased to a fair-sized colony, but this year they produced neither surplus honey nor swarms.

I have increased my apiary to 13 colonies, and have them prepared for winter on the summer stands; and besides what honey was consumed in a large family, I have left about 150 pounds of comb honey in one-pound sections.

In the BEE JOURNAL I have seen descriptions of different kinds of swarm-catchers, but I use one which I think is far ahead of any which has been described. The following is my manner of hiving bees and a description of my swarm-catcher: When I hive bees, I put the hive on the summer stand, where it is to remain, and place two small ½-inch blocks under its front. Then I take a planed board about one foot wide by 2 feet in length, and place it in a slanting position, so that when I pour the bees upon it, they will slide down in front of the hive. I have a light box made of ¼-inch lumber, which is about 8 inches square and 14 inches deep, and which has five one-inch holes bored on each side. I then put a light, stout pole through the hole in the centre of one of the sides, and let it run through the box and secure it on the opposite side. The pole may be left any length that is desired. I also use a second pole which has a hook in one end.

As soon as a swarm has clustered, I hold one side of the box against the cluster, and with the pole which has the hook, I shake or jar lightly whatever they may be clustered on, and it is surprising to see how quickly they will all be in the box. I have hived a large swarm in this manner in less than five minutes.

After carrying the box of bees to the hive, turn the open end of the box on the slanting board before the hive, and the bees will roll or slide easily to the hive entrance. If some of the bees still adhere to the box, give it a sudden jerk and the remaining bees will immediately roll out. If the work is done rightly, I think it is the quickest and best method of hiving bees, as there is no smashing of bees, no trees to climb, and the bees can be carried as far as desired. A bee-keeper, to whom I described my swarm-catcher, and whom I induced to try it, told me that if the box were put up among the flying bees as soon as the swarm issues, in nine cases out of ten, they would cluster in it.

Taylor Centre,⊶ Mich.

For the American Bee Journal.

Honey Production and Consumption.

WM. CAMM.

I wish that Mr. Heddon would turn his attention to economics for a year or so before he writes another article such as that on page 756, in which he advises us to cease condemning and exposing adulterations. Indeed, it would be well if all of us would remember that we cannot, as a class, have the world all to ourselves; but we must share the fortunes and the fate of all other classes.

Economics should be considered under three divisions or heads, viz: production, distribution, and consumption. Bee-keepers have an immunity in the first division which no other class, unless it be fishermen, can be said to enjoy; but in the division of distribution, they have a privilege which other classes have not, only in some places; while in the third division, consumption, they meet a drawback which neutralizes every advantage that they otherwise possess.

We produce only that we may consume. To increase consumption is to encourage production; to limit consumption, discourages production. We have, like every other class, done all we could to increase the production of honey; we have done something to induce others to consume; but we have done nothing to enable others to buy. I have not yet sold a pound of honey in a city market, but have done all I could to develop the local market in the country and town about me, and I have found that my best customers were not the wealthy with plenty to spend, but the working men and women, whose consumption was limited by their wages, or their ability to buy; and I have naturally asked myself how it was that those whose labor moved the world, were forced to stint themselves in buying what is usually considered a luxury, but which, when healthfulness is considered, may be regarded as a necessity.

To-day there are tens of thousands out of employment; and, on account of their enforced idleness, unable to obtain even the necessaries of life, to say nothing of luxuries; but in looking over the division of production, I find nothing lacking; there is the labor, and here is the land; and all wealth is produced by the application of labor to land. Our warehouses and granaries are so full that superficial thinkers are crying out over-production. There can be no such thing as over-production, though relative over-production there may be, and now is. Some men have labored, some have not; and those who have been idle have no products to exchange with those who have worked; hence those who have produced honey, or corn, or pork, say that there is too much produced; while those who get no remunerative employment say not enough is produced, and that bread and meat are beyond their reach; while such a luxury as honey they dare not think of. Consumption being thus limited, production becomes profitless because exchange is forestalled. Now, where is the trouble?

After all our boasting it is clear that we could not attain to half the population per square mile which China has supported for centuries, so bad are our laws of distribution that thousands and tens of thousands are forced into want and suffering while ware-rooms and elevators are crammed.

I have just taken my last honey to market; it went to grocerymen almost under the shadow of a woolen factory; the last two crates went to a man to whom I have never sold before, and who whistled when I named the price. Behind us stood a factory woman, and the grocer, lifting a section and turning it before her, "How pretty!" The woman looked at it longingly, and in a soliloquizing voice, as though her thoughts reverted regretfully to her children, "O! how nice!" But she did not buy. My wife wanted some blankets which I could not afford to buy. Here was producer and consumer face to face, but there was a barrier between them. What was that barrier? She wanted honey, and though she made blankets, she could not afford it; I wanted blankets, and produced honey, but could not exchange. Why? Our landlords wanted neither honey nor blankets, but money, and we had to raise that before we could supply our own necessities.

I have long ago learned why our system of distribution was so bad. Dealing in a local market, and often directly with the consumers, my own neighbors, with whose circumstances I was more or less acquainted, I saw that it was the price that productive labor had to pay to non-productive ownership that constituted the barrier between producer and consumer, and which rises as fast as we approximate those conditions which we are all striving to gain. Carlyle has put it well: "A widow is gathering nettles for her children's dinner; a perfumed seignior, delicately longing on an *Œil de Bœuf*, hath an alchemy whereby he will extract from her the third nettle, and call it rent."

To eliminate the unearned increment, rent, is the task before us. It is easy to do where once the evil is pointed out, but I am glad that bee-keepers cannot do it by themselves, but join with every other producing class to effect the reform. I wish that every periodical would devote a reasonable space to economics. Until we do something in this direction, we are only beating our brains against a wall. I have more trouble and anxiety in disposing of my honey than I have in producing it. Should I succeed in getting a competency, or something more, I must use it in preying upon others as I am now preyed upon. I shall continue to condemn adulteration and fraud, and I desire no knowledge which is not as good for my neighbor as for myself; but I shall hereafter devote more time to the removal of the evil which robs me and every worker in the human "hive" of more than half of what my labor produces.

Murrayville,+o Ill., Dec. 13, 1884.

For the American Bee Journal.

Rearing and Introducing Queens.

C. W. DAYTON, 114.

As I am a stickler for business-queens, and believe the best if not the only practical method for the honey-producer to obtain them, is by the swarming-impulse, early in the season, I begin building up a few colonies in order to obtain early queen-cells. Soon after I find the first capped queen-cell, I divide an ordinarily populous colony by inserting a division-board near the centre of the brood-nest, which causes queen-cells to be built on the part not containing the queen. This colony I use as a queen-nursery.

As the first swarms issue, I hive them on empty combs in hives on the old stands, and after taking the queen-cells from the combs in the old hives, I put them into the cellar for a couple of days, after which I unite as much of them as is advisable, with the swarms, and use what is left where it is most needed. I fasten the queen-cells into cages which I tie in bundles and place (with the cells pointing downward) under the enameled cloth of the nursery-colony, after withdrawing the division-board. This prepares the nursery-colony to accept an unfertile queen, though it contains a laying one.

The cages which I use are made of one piece of wire-cloth, and are 1½ inches long by 1 inch square, and have a piece of wood for a stopper, to the inside of which is fastened, by means of a tack, a small amount of the "Good" candy.

Knowing the age of the queen-cells in each bundle, from a slate hanging in a corresponding position on the outside of the hive, I know just when and where to look for queens. As the queens hatch, I remove the empty cells and put 3 or 4 young bees into each cage. In the evening, when the queens are 7 days old, and having at my side a hive large enough to hold one standard frame, I open the nursery-hive as quietly as possible, using just enough smoke to quiet the bees, and no more; then I lift a frame of brood with adhering bees (without the queen) and set it edgewise on the alighting-board, and lean it against the hive. I then draw the stopper from a cage containing an unexcited queen, and allow her to walk at her leisure out on the comb amongst the bees; the main point being free her without her knowing it.

If a queen should get excited when released (a thing which they seldom do when handled rightly), I immediately re-cage her and try another. Having released one that performs satisfactorily, and having placed the comb in the little hive, I put it as far from any other hive as is possible and convenient. The vacancy in the nursery-hive may be filled with frames of brood taken from colonies which are able to spare them. If the whole of the next day following the one on which the queens were introduced should be pleasant, and there are plenty of drones flying, by evening about one-half of the queens should bear evidence of fertilization, when they may be taken out and another unfertilized queen may generally be easily introduced.

If I have no immediate use for laying-queens, I put them into cages which may be laid on the brood-frames of any colony in the apiary, for future use, and where I have kept them 65 days very successfully. The bees, after being used in the nuclei, may be disposed of at the entrance of the hive from which they were taken, and the brood may be used in building up weak colonies.

Through an accidental discovery in the spring of 1883, I have been led to practice, for the last two seasons, the method as here described; but since the appearance of the article by S. Simmins, on page 456, it has been with greatly increased success as well as pleasure. By this method I have several times introduced unfertile queens in the forenoon, and found them depositing eggs by the evening of the next day. I have also had two queens fertilized from one nucleus in 48 hours.

My experience with this method during the past season covers the introduction (without loss) of 67 unfertile queens, 2 of which proved to be imperfectly developed, 1 was lost in mating, and 2 nuclei absconded after the queens had been laying several days. The others are now in colonies.

Bradford, δ Iowa, Dec. 12, 1884.

For the American Bee Journal.

Western Maine Convention.

L. F. ABBOTT.

The third quarterly session of the Western Maine Bee-Keepers' Association was held on Nov. 25 and 26, 1884, at Mechanic Falls, Me. The attendance was good, and a lively interest was manifested in all the discussions. The Association now has a membership of about fifty.

The main topics discussed were methods of wintering bees, including wintering bees in chaff-hives, on summer stands, and in single-walled hives in the cellar. The comparative merits of Italian and black bees were briefly discussed.

The first session convened at 1 p. m., on Nov. 25, 1884. The topic of wintering bees in chaff-hives was introduced by the reading of an essay by Mr. E. P. Churchill, of North Auburn. Some points in the essay called out an animated discussion which continued till evening. The experience of the members present extended over a period of time ranging from two to forty years.

The evening session was devoted to the discussion of wintering bees in the cellar. When proper conditions had been observed, cellar-wintering had been quite uniformly successful.

Mr. Pike, of Livermore Falls, had for 15 years followed the practice of placing his hives in the cellar. He had never lost a colony by that method when the hives contained sufficient stores.

Mr. J. B. Mason, of Mechanic Falls, had, for 7 years, wintered bees in chaff-hives, and had not lost a colony. Chaff-hives are now generally adopted by the bee-keepers of Maine.

Mr. Hatch, of Minot, had kept bees for 40 years, and had used the Kidder hive which was constructed somewhat on the double-walled plan. He thought that the chaff-hive was an improvement on the Kidder hive in that respect.

Mr. Mason now has some 30 colonies of bees wintering in the cellar. His practice has been to winter a part of his bees out-of-doors and a part in the cellar. When placed in the cellar the hives were raised a half-inch from the bottom-boards, when these were loose; or the entrances left open when the bottom-boards were fast. The bees were crowded upon 5 or 6 frames and division-boards placed on each side. On the top a quilt was placed, tacked on half-inch strips of wood, to allow the bees a passage over the frames. His cellar now maintains a temperature of 45° above zero. This he considered the right temperature, and in that condition the bees remained quiet. As the temperature of the cellar went down, the bees became uneasy. The remedy was to raise the temperature by artificial heat if necessary.

L. F. Abbott, of Lewiston, had wintered bees with uniform success, until last winter. His bees had consumed, having been ascertained by careful test, from 8½ to 22½ pounds of honey per colony, and were wintered in the cellar. Ventilation was given by means of a tube conducting air from the outside.

The decision of those who had wintered bees under the snow seemed mainly to condemn the practice of allowing the snow to remain drifted over the hives long at a time, especially during the months when the snow was likely to become dampened by its thawing.

At the evening session an essay was read, sent in by Mr. Addition, of Dexter, President of the State Bee-Keepkers' Association. The subject being mainly relative to preparation of bees for winter. One point was to extract early enough in the fall so that the bees could be fed successfully all the field-gathered stores, and syrup of granulated sugar.

Another point was the merits of the Italian bee over the common black bee. The discussions of this latter subject was left over until the following forenoon.

Mr. Hutchinson favored the Italian bees because they were better to handle. Black queens were hard to find, and when black colonies were smoked, the bees came out and filled the air, and made an uproar generally.

Julius Fuller, of Oxford, said that from his experience, the Italians would go to the fields better and do less loitering about the hive-entrances than the blacks.

Mr. Churchill had conflicting opinions concerning the two races of bees, but from his experience and observation, he thought the Italians preferable. When we come to handling the bees, the Italians flutter out on the frames like a scared toad; but when you touch the blacks you have reversible bees at once.

Remarks were made by Messrs. Mason, Abbott, Welcome, and others. A communication was read from the editor of the *American Apiculturist*, referring to the formation of an association of bee-keepers for the New England States.

A resolution was adopted at the opening session of the convention constituting Mr. J. E. Pond, Jr,, of Foxboro, Mass., an honorary member.

Action was taken at the closing session changing the meetings of the Association from quarterly to semi-annual, to be held on the first Tuesday and Wednesday in May, and in September. The next meeting will be at Mechanic Falls in May, 1885.

Lewiston, Maine.

For the American Bee Journal.

The International Congress.

☞ It is proposed to hold an International Bee-Keepers' Congress on the World's Exposition Grounds at New Orleans, La., Feb. 24, 25 and 26, 1885. An interesting programme of subjects of great importance to every bee-keeper in America will be presented and discussed. The disposition of our honey product, with a view to secure better prices will be fully considered. At the same time there will be an Exhibit of Bees and Apiarian Supplies. Fuller particulars will be given hereafter. At the time selected, the Exposition will be at its best, and excursion rates low. The bee-keepers of our country should lay aside business for a week or two, and make every exertion to attend this Convention. Come prepared with facts and statistics, and ideas arranged, to take part in its deliberations.

Dr. N. P. Allen, Smith's Grove, Ky.
W. Williamson, Lexington, Ky.
Dr. O. M. Blanton. Greenville, Miss.
P. L. Viallon, Bayou Goula, La.
Judge W. H. Andrews, McKinney, Tex.
W. S. Hart, New Smyrna, Florida.
S. C. Boylston, Charleston, S. C.
Dr. J. P. H. Brown, Augusta, Ga.
H. C. Austin, Austin's Springs, Tenn.
R. C. Taylor, Wilmington, N. C.
J. W. Porter, Charlottesville, Va.
S. Valentine, Hagerstown, Md.

For the American Bee Journal.

To the Bee-Keepers of the Northwest

At the last meeting of the Northwestern Bee-Keepers' Society, a special committee was appointed as follows:

T. G. Newman, Chicago, Ills., Pres.
T. L. Von Dorn, Omaha, Neb., Sec.
Rev. O. Clute, Iowa City, Iowa.
Jas. A. Nelson, Wyandotte, Kan.
Prof. A. J. Cook, Lansing, Mich.
Dr. G. L. Tinker, New Philadelphia, Ohio.
A. Fahnestock, La Porte, Ind.
C. H. Green, Berlin, Wis.
D. G. Parker, St. Joseph, Mo.
C. F. Greening, Grand Meadow, Minn.,

for the purpose of securing, by legislation in the several States of the Northwest, laws for the suppression of foul brood, and for securing statistical reports of apiarian products. After consultation with Gen. C. F. Manderson, of Omaha, a Nebraska senator, I am convinced that a petition or petitions asking to have our products included in the crop reports of the Department of Agriculture will meet with a ready response and prompt action at the hands of Congress. Senator Manderson said that he would be pleased to serve the bee-keepers in the matter, and had no doubt as to the result.

I would, therefore, earnestly request the bee-keepers of the United States to advise me at once, by postal, as to their desires in the matter, that I may forward their views to Washington. Their full views upon all the subjects contained in this article are urged, giving in detail all that they may think necessary to be mentioned in the petition, or in the laws for the suppression of foul brood. My own ideas upon the subject of petition are these:

We, the undersigned petitioners, bee-keepers of the United States, do respectfully request of your Honorable Body, that crop reports of apiarian products may be included in the reports of the Department of Agriculture: we would further ask that such reports should state the number of colonies of bees in the various States and Territories upon the first day of June of each year; and that upon the first day of August and upon the first day of Oct. of each year, there shall be made a report giving as nearly as possible the number of pounds of comb and extracted honey produced in the several States and Territories, together with a statement as to the source from which it was derived. The October report is to contain, also, the probable production of beeswax.

It will also be in order to support this petition with an argument as to its desirability, which should go with it. These are only my own crude ideas. Let me hear from all.

The matter of foul brood is entirely a State matter. As it is altogether probable that a *cure* for this dread disease is now possible, I imagine that we will not need any death-penalty laws on the subject; but I imagine that we *shall need* well-drawn laws in every State to suppress it. The specialist will hardly need a law, at any rate, not on this side the Rockies; but what will we say, if the disease can be carried in the honey which is just now being sent to us from portions of California, the bees of which, by good authority, are much affected with foul brood. Leaving this source of danger out of the question, there yet remains that large class of shiftless bee-keepers, who either do not know or do not care about it, and hence the necessity of sound law.

I should be pleased if those who can will send me drafts of the law as they think it *should be*.

T. L. VON DORN, *Sec. Spec. Com.*
820 S. Ave., Omaha, Neb.

◆

For the American Bee Journal.

Tuscarawas County, O., Convention.

The bee-keepers of Tuscarawas County, O., met at New Philadelphia, O., on Oct. 21, 1884. The meeting was called to order by the President, A. A. Fradenburg, after which he delivered an opening address to the convention, confining himself mainly to the cultivation of honey-plants. In his remarks he stated that he believed that it would pay to cultivate plants for honey alone.

Many subjects were brought up, and different views concerning them were advanced. Never before was there such an interest taken in bee-ture in old Tuscarawas county as there is at the present time.

The number of colonies of bees represented was 173, spring count, and 267 fall count, and the number of pounds of honey taken was 5,216.

That which may most interest bee-keepers in general was a discussion of open cider-mills and their effect on the bees. After the discussion, Messrs. Swinehart and Williams were appointed to draw up a petition to be presented to our State legislature, asking that all open cider-mills be so enclosed as to exclude all bees. The following is the petition:

To the General Assembly of the State of Ohio:—

HONORABLE SIRS: *Whereas*, Bee-culture is now a standard occupation in our State, there being a large number of both men and women engaged in it as a means of subsistence; and

Whereas, There are many cider-mills, or places where cider is made, in close proximity to our bees; and

Whereas, Our bees are, as it were, enticed by the cider to the place of making; and that many thousands are drowned and crushed, during the making of the cider, to such an extent that many colonies are almost depopulated; and that in the fall, when they have ceased rearing bees, and thus go into winter quarters in reduced numbers, greatly increasing the mortality among them; and

Whereas, Much cider is carried away by the bees and stored in the combs of the hives, which, when eaten during cold weather, produces dysentery or bee-diarrhœa, which destroys more bees than all other things combined, and sometimes almost depopulating whole apiaries.

Therefore, We, the bee-keepers of the State of Ohio, do petition and earnestly request that you protect us in our cultivation of bees and production of honey, by the passage of such a law as will require all persons engaged in the making of cider to enclose their mills so as to exclude bees.

It was decided, after much discussion, that the best manner to get the above petition before the Legislature, was to have every bee-keeper to copy it and get the bee-keepers of his neighborhood to sign it, and that all be sent to some one person who will present all to the Assembly. Mr. A. A. Fradenburg, of Port Washington, O., will receive the petitions.

We would like all interested in this matter to give their views on this question, and also their efforts in bringing about the desired result.

GEO. F. WILLIAMS, *Sec.*
A. A. FRADENBURG, *Pres.*

◆

For the American Bee Journal.

Getting Statistics—Peculiar Season.

J. W. MARGRAVE.

We have had the most peculiar season, so far as honey is concerned, that I ever saw. I wintered my bees mainly in a clamp, took them out on April 1, and found 7 out of 45 colonies dead, and a majority of the others badly affected with bee-diarrhœa. I had 12 colonies on the summer stands, one of which was dead, but there was not much diarrhœa among the others. In the spring they dwindled down to 38 colonies by May 10, and many of the remaining colonies were reduced to a mere handful.

It was cold and wet during fruit-bloom, and they only got honey enough to keep brood-rearing going well until in June, when they began to swarm; and by dividing, together with natural swarming, I increased them to 66 colonies. I secured no surplus honey until Aug. 18, when the bees began to show signs of activity, and for five or six days gathered honey very rapidly. I was on the point of extracting a barrel or two of honey, but on Aug. 24 we had an intensely hot day, and nearly all of the bees lay out on the outside of the hives, and just then our honey season ended.

I extracted none at all, and doubled them back from 66 to 53 colonies, and left them out on the summer stands, with ½-story on the top of the hives filled with forest leaves; how many I shall lose in wintering, I will be able to report about May 1, 1885.

In regard to getting statistical reports, I would say that I think it can be done better through the assessors of the different townships than by any other way. In our county we now get a pretty fair report in this way, but we do not get the increase for the preceding year, only the number of colonies and the amount of honey and beeswax. Now, if we could get the blanks so printed as to show the increase of colonies as well as the number of colonies lost in wintering (and by a little effort this might be done), what more would we need?

Hiawatha, ♂ Kans., Dec. 16, 1884.

Local Convention Directory.

Time and place of Meeting.

Dec. 27.—Union, at Stuart, Iowa.
M. E. Darby, Sec.

1885.
Jan. 6.—Southern Wisconsin, at Janesville, Wis.
J. T. Pomeroy, Sec.

Jan. 8.—Champlain Valley, at Middlebury, Vt.
J. E. Crane, Sec.

Jan. 14-16.—Nebraska State, at Tecumseh, Neb.
M. L. Trester, Sec.

Jan. 14.—Central Illinois, at Bloomington, Ills.
W. B. Lawrence, Sec.

Jan. 15.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.

Jan. 20, 21.—N. W. Illinois, at Freeport, Ills.
Jonathan Stewart, Sec.

Jan. 21—23.—Northeastern, at Syracuse, N. Y.
Geo. W. House, Sec.

Jan. 22, 23.—Indiana State, at Indianapolis, Ind.
Frank L. Dougherty, Sec.

Feb. 24-26.—International, at New Orleans, La.

May 28.—N. Mich. Picnic, near McBride, Mich.
F. A. Palmer, Sec.

June 19.—Willamette Valley, at La Fayette, Oreg.
E. J. Hadley, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

A Good Report.

I use the Langstroth-Simplicity hive, and my bees are the common or brown German. I commenced the season with 18 colonies, 6 of which were very weak, and I lost one colony by being robbed while I was away from home. I have increased my apiary to 32 colonies, and my crop is 2,150 pounds of comb honey in one-pound sections, 75 per cent of which is white honey. How is that for a poor honey season?

A. Kronemyer.
Hudsonville,+○ Mich., Dec. 14, 1884.

Bee-Keeping in Wyoming Territory.

I am pleased with the bold stand you have taken against adulteration. That humbug cry of honey adulteration greatly retards the use of honey for food. One of my neighbors, a wealthy cattle and sheep owner, told me the other day, in a very wise (?) and emphatic manner, that all honey put on the market now-a-days, is artificial, made from sugar and glucose, and that he had *seen* the *combs* made in large quantities by machinery in a "factory" right in the great city of Chicago. It was useless for me to endeavor to explain the matter to him, or to argue him out of such absurd ideas, and I had to "grin and bear it." My honey-bees have wintered well and stored nice, white surplus honey from the wild prairie and mountain flowers during the three years that I have had them. They are the first and only honey-bees ever brought to Wyoming Territory. This is a wonderful region, where flowers sometimes blossom ten thousand feet above the sea-level, and the great mountains rear their caps of snow above the clouds, and where bears, mountain-lions, elk, deer, antelopes and mountain-sheep abound; also gold, silver, copper, iron, coal, asbestos, sulphur, soda, and even petroleum are found. This is also the particular region where the celebrated Wyoming moss-agates are found, which are considered the most beautiful in the world; and the different ores, fossils, crystals, petrifactions, etc., in all their peculiar forms and colors, are interesting to all lovers of nature.

G. G. Mead.
Rawlins,♀ Wyo., Dec. 5, 1884.

Bee-Exhibit at the World's Fair.

I am authorized to say that the time of the exhibit of colonies of bees at the World's Fair at New Orleans, La., will be during the week of the Bee-Keepers' Congress, and not as given in the published Premium List.

J. P. H. Brown, M. D.
Augusta,○+ Ga., Dec. 11, 1884.

Profiting by Mistakes.

I had 5 colonies of bees, spring count, and I have taken about 125 pounds of comb honey and 75 pounds of extracted honey. My bees were weak, and the spring being so cold and wet, with high winds, they had no chance to work. No swarms issued until Aug. 6, when our fall bloom commenced, which was very good; but wishing to rear some queens, to supersede some that I had, I did not get as much out of the bloom as I might. I increased my apiary to 10 colonies, and they were put into winter quarters in pretty good condition. On looking back I can see my many mistakes, but I hope to be able to rectify them during another year.

W. Stout.
Delaware City,♂ Del., Dec. 10, 1884.

What is the Duty on Cuban Honey?

I see by the text of the new commercial treaty with Spain, that eggs, honey, wax, etc., from Cuba and Porto Rico, are to be admitted into the United States free of duty. It seems to me that if this treaty is ratified, it will tend to materially lower the price of honey in the United States, as I understand that some honey is imported from Cuba now under a duty of about 20 cents per gallon. Will some one who knows, please say through the Bee Journal what honey is worth in Cuba? What kinds they produce mostly, comb or extracted? and in what quantities?

A. F. Robson.
Italy Hollow,+○ N. Y., Dec. 12, 1884.

Getting Sections Completely Filled.

I attended the late convention of the Michigan State Bee-Keepers' Association and exhibited a few samples of sections filled with honey, in which the foundation had been fastened at both ends, and one could hardly tell which was top or bottom, except by the cells. Now, I would like to have every bee-keeper try this plan. Cut the foundation ½ inch longer than the section and fasten at both ends. It will make a sort of brace, and the bees seem to take to such sections sooner than when they are only half filled. The weight of the bees does not pull down the foundation as they sometimes do when the sections are only half filled. I tried about 100 of them during the past summer, without separators, and I crated 90 of them in crates holding 32 4¼x4¼ sections, and they weighed 36 lbs. to the crate. If the foundation is fastened in this way, there is no up or down and the sections can be placed in the hives on either end and will not need to be reversed in order to get the bottoms attached. The bees will build them solid all around. I am going to fasten all my foundation at both ends after this, for I know that it is a good way to get sections completely filled. I do not claim this for the 2-lb. sections, for I have not tried them yet, but I will do so next season. Of course by this plan a little more foundation will be used, but one will get it all back again in nice, well-filled sections.

John Rey,
E. Saginaw, ⊙ Mich. Dec. 15, 1884.

Pollen the Cause of Bee-Diarrhœa.

When the question, "Is pollen the cause of bee-diarrhœa?" is asked, I would answer, yes, and the pollen which causes the trouble is found in the honey. I have lost no bees since I discovered that some honey contains pollen. I am satisfied, from past experience, that the "pollen theory" is correct, and the pollen is found principally in the honey.

Chas. Harrold, 14—36.
Hamburgh, ○\ Iowa, Dec. 13, 1884.

Hives Packed for Winter.

I have six colonies in Langstroth hives packed with cloth above the brood-chamber, and the upper story filled with dry oak-leaves. The hives are set one foot apart, the spaces between them at their backs are filled in with straw, and a board roof is over all. I will tell you in the spring how they wintered.

W. R. Elwood,
Lindley, ♂ Mo., Dec. 13, 1884.

Light Honey Crop.

The honey crop in this country is light. Populous colonies have produced an average of 40 pounds of extracted honey or 20 pounds of comb honey per colony. Those colonies which swarmed and also their swarms have hardly made a living. Extracted honey sells for about the same as good molasses—5 cents per lb.; and comb honey in sections sells at 10 cts. per lb.

Frank Thaville,
Forest City, ○+ Ark., Dec. 10, 1884.

Many Swarms Absconded.

I secured about 800 lbs. of extracted honey from heart's-ease which is worth 12 cents per pound, and I have paid out about $60 for various kinds of supplies, and a great deal more for experience. The increase was made by division. The season was a very poor one, and the bees stopped working a full month before frost came, while last year they stored honey rapidly until frost appeared. A great many swarms absconded in this vicinity, many of which will starve, as there are few trees left along the streams large enough to contain a winter supply of honey for a colony of bees.

DAVID M. IMLAY, 15—39.
Seward, ⊶ Nebr., Dec. 15, 1884.

Pollen not Harmful.

I have 129 colonies of bees in good condition for wintering on the summer stands in double-walled hives packed with tow. I have not lost a single colony in wintering in these hives since 1881. I have no trouble with spring dwindling or bee-diarrhœa. I wintered my bees on honey and all the pollen that I could give them, and they have come out all right, nice and bright every spring; so the "pollen theory" is all wrong to me. As I wish to change from the one-pound, 4¼x4¼x2-inch section, to a one-pound 1¾ inches wide, what must be the size of the latter?

A. KOEPPEN.
Flint, ⊙ Mich., Dec. 14, 1884.

[About 4½x4½ inches.—ED.]

Reply to Mr. Kendall.

In reply to Mr. Kendall's just and friendly criticisms on page 790, I will say that I feel his inferior rather than his superior upon the subject of organization as an antidote for adulteration. I take no issue with him, if he means an organization of producers for the purpose of working against the practice of adulteration, for while they were at this work, they might work against over-stocking the honey markets by inducing every one to keep bees. I do not think that the practice of adulteration hurts us because of the *quality* of the mixed goods, but by the addition of *quantity*, especially when put on an already over-stocked market. I have little fears of adulteration, for our introduction of small packages has closed nearly all the re-packing honey houses, and I claim that such are the laws of specialty that no producer can make it pay to adulterate. He had better put his capital, muscle and thought into straight-forward production; better in a dollar-and-cent point of view. The reason why I thought that organization would do us only harm, was because I expected that organization, while it discouraged the increase of 1-lb. of mixed honey, would foster the increase of 3-lbs. of the pure article, whose every pound we just as much dread; and the reporters of papers would go away and say: "The bee-keepers, themselves, declare that the markets are loaded with bogus honey; they say that comb honey is not exempt." If Mr. Kendall means for us to have a producers' convention, a meeting of men who hold the same views as he and I, one that will do its work in the interests of producers who now exist, not only regarding our interests in the adulteration matter, but the over-production matter as well, I am very much in favor of such a meeting. I should rejoice to once attend a meeting that I thought came to more than it cost. Let us hear from Dr. C. C. Miller on this subject. Who are conventions for, and whom have they benefitted?

JAMES HEDDON, 400—460
Dowagiac, ♀ Mich.

Too Hasty a Conclusion.

In Mr. Youngman's article, on page 793, is a paragraph which requires correction. It was not "Cyula," but myself, who took positive grounds in discussing the wintering problem. Being a stranger, and making but a short call, it is not surprising that Mr. Youngman's memory should be somewhat at fault. That I "smiled audibly" at either of the theories mentioned, must be only Mr. Youngman's graphic way of representing that I did insist upon my "absurd" little theory, viz: That bees will surely winter well when properly prepared and packed on their summer stands in good season; meaning, of course, by properly prepared and packed, according to my own method, which after all does not differ materially from that employed by hundreds of others. Some of our bee-keeping friends know how little encouragement my sister gives me, when I undertake to maintain that we have proven that we can winter bees successfully. NELLIE LINSWIK.

Poor Season, but not Discouraged.

The past season has been the poorest one for honey secretion in this locality that I have experienced anywhere since being in the bee-business. I began with 24 colonies in the spring, and a part of those were light, yet during April and May, I got them into good working condition; but when June came, with all its abundant bloom, it was a time of perfect starvation to the bees throughout this neighborhood, and many of the colonies died. During July they secured enough honey to start brood-rearing, and during August the most of them stored enough for winter use. From Aug. 15 to Aug. 24, I never saw such a rush for the boxes as the bees made, but two days later all was at a standstill, and the consequence was that my surplus boxes were left about half-filled. I left them on the hive, still hoping that we would get another flow of honey in Sept., but no more was stored than what they required, so I was obliged to take off the cases with 100 lbs. of finished comb honey, and 75 lbs. of extracted. My increase was 6 swarms by natural swarming and 5 by division, and 2 nuclei with my breeding queens in them. I have received poor pay this season, but I am not discouraged, for the harvest will come. I have put 31 colonies into winter quarters, some of them being very light and weighing only 16 to 18 pounds, *i. e.* of bees and stores. All are sleeping quietly now, but whether they will all wake up in the spring is yet to be seen. I have 16 colonies in the cellar and the balance outside.

ROBT. CORBETT.
Manhattan, ♂ Kans., Dec. 9, 1884.

Convention Notices.

☞ The seventh annual meeting of the Nebraska State Bee-Keepers' Association will be held at Tecumseh, Neb., on Wednesday, Thursday and Friday, Jan. 14, 15 and 16, 1885; the first session beginning at 3 p. m. on the 14th. Notices will be posted in the Tecumseh depots, stating the hall in which the meeting will be held. The meeting has been appointed this time in the southeastern part of the State, expecting that Iowa, Missouri and Kansas will be well represented. We already have the promise of several prominent bee-keepers of other States to be present. Please notify me immediately, at Lincoln, Nebr., what route you wish to take to get there, and I will send you a Railroad certificate, entitling you to reduced rates. Do not neglect this.

M. L. TRESTER, *Sec.*

☞ A meeting of bee-keepers will be held at Rock Elm Center, Wis., on Wednesday, Dec. 31, 1884, for the purpose of organizing a bee-keepers' society. All who are interested are invited to be present.

A. C. SANFORD.

☞ The Mahoning Valley Bee-Keepers' Association will hold its next meeting in the Town Hall at Newton Falls, O., on the third Thursday in January, 1885. The meeting will be instructive as well as interesting. E. W. TURNER, *Sec.*
L. CARSON, *Pres.*

☞ The Champlain Valley Bee-Keepers' Association will meet at the Addison House in Middlebury, Vt., on Thursday, January 8, 1885.

J. E. CRANE, *Sec.*

Premium for Club of 10 Subscribers.

The book for every farmer is the one entitled "Affleck's Farmer's and Planter's Record and Account Book," in which there is the most systematic, complete and convenient arrangement of headings for every Farm Account and memoranda of all important events which may occur in connection with his business. Every progressive farmer certainly desires to make a success of his occupation, and should adopt every possible means of bringing about that result. He, then, should have a correct knowledge of his entire business, which he can have only by keeping a correct account of every crop produced on his farm, the cost of production of all his live stock and an itemized account of all his expenses. Then at the close of the year, when he takes off his balance sheet, which is admirably arranged in the book above referred to, he will be able to see at a glance whether his farm does or does not pay.

This valuable book contains 166 pages, is nicely printed on writing paper, ruled and bound, and the price is $3.00. It can be sent by mail for 24 cents extra.

We can supply these books at the publisher's price, or will make a **present** of one copy for every club of TEN subscribers to the Weekly BEE JOURNAL for one year, with $20. Four subscribers to the Monthly will count the same as one for the Weekly.

Now is the time to get up Clubs. Who will work for a copy of this valuable book.

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Convention Notices.

☞ The sixteenth annual convention of the Northeastern Bee-Keepers' Association will be held in the City Hall at Syracuse, N. Y., on the 21, 22 and 23 of January, 1885. The executive committee are determined to maintain the high standing and enviable reputation which the Association has justly gained in the past, and at the coming convention they propose to outdo all former efforts. The meeting will surely be the largest and most interesting ever held in America. No bee-keeper can afford to stay at home. All are invited. All implements of the apiary sent to the Secretary, will be properly arrayed to compare favorably with others on exhibition, and will be disposed of or returned, as the owner directs. Reduced rates for board at hotels.

GEO. W. HOUSE, *Sec.*
L. C. ROOT, *Pres.*

☞ The regular annual meeting of the Indiana State Bee-Keepers' Association will be held on Thursday and Friday, Jan. 22 and 23, 1885. The meetings will be conducted in the rooms of the State Board of Agriculture, on the corner of Tennessee and Market Streets, in Indianapolis, Ind. It is proposed to make this the most important and interesting meeting of bee-keepers ever held in the State. An extensive programme, including all questions of importance to bee-keepers, is being prepared and will be soon sent out to bee-keepers throughout the State. Prominent apiarists from neighboring States have been invited to assist and presumably many of them will be in attendance during the meeting. These gatherings are of vast importance, especially to beginners, and all those at all interested in this important industry should make it a point to attend this meeting.

FRANK L. DOUGHERTY, *Sec.*

☞ The eighth annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Temperance Hall, at Freeport, Ill., on Jan. 20 and 21, 1885.

JONATHAN STEWART, *Sec.*

☞ The Central Illinois Bee-Keepers' Association will hold its next annual meeting in Bloomington, Ill., on the second Wednesday in January, 1885, at 9 a. m.

W. B. LAWRENCE, *Sec.*

☞ The Willamette Valley Bee-Keepers' Association will hold its second meeting at La Fayette, Oregon, on the third Tuesday in June, 1885. All who are interested are invited to attend.

E. J. HADLEY, *Sec.*
F. S. HARDING, *Pres.*

☞ The Union Bee-Keepers' Association of Western Iowa will meet in Stuart, Iowa, at 10 a. m. on Saturday, Dec. 27, 1884. All who are interested are invited to attend.

M. E. DARBY, *Sec.*

The Bee Journal for 1885.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following

CASH PREMIUMS FOR CLUBS.

$10.00 for the largest club received at this office before Feb. 1, 1885 (either of the Weekly, Monthly, or both); one Weekly counts same as 4 Monthlies.

$5.00 for the second largest; $4.00 for the third; $3.00 for the fourth; $2.00 for the fifth; and $1.00 for the sixth largest club.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Phenol for curing Foul Brood.

As there is much interest manifested by Americans on the above subject, we have published Mr. Cheshire's experiments and investigations in pamphlet form—32 pages—and will send it postpaid for 10 cents to any address.

☞ For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail postpaid.

☞ Dr. J. P. H. Brown, Augusta, Ga., writes thus concerning our "Bee-Keepers's Convention Hand-Book:" I have examined it, and find it most superbly gotten up. You have embodied in it all the gist of the Parliamentary Manuals of Jefferson, Cushing and Mell. Aside from the information it contains, no bee-keeper can afford to do without it for a memorandum book."

☞ For $2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for $1.75. Or, bound in cloth, with Weekly, $3.00; with the Monthly, $2.00.

☞ We will send sample copies free to all who wish them, or desire to get up Clubs. Now is the time to work for the Cash premiums we offer. A large club for the Monthly can be gotten up in almost every locality.

☞ We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., Dec. 22, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

NEW YORK.

HONEY.—Our market is well supplied with comb honey, with an unsatisfactory demand for it, even at the following low prices:

Fancy white comb in 1-lb. sections, 16@18c.; the same in 2-lb sections, 14@16c.; fair to good white comb in 1 and 2-lb. sections, 13@15c.; fancy buckwheat comb in 1-lb. sections, 10@11c.; same in 2-lb. sections, 9@9½c.; ordinary grades of buckwheat comb honey, in 1 and 2-pound sections, 9@9½c. Extracted, white clover, in kegs or small barrels, 8@8½c.; buckwheat, in ditto, 6@7.

BEESWAX.—Prime yellow, 31@32c.

MCCAUL & HILDRETH, 34 Hudson St.

BOSTON.

HONEY.—We quote best white in 1-lb. sections, 18@20c.; 2-lb., 16@18c. Extracted, 8@9c. Unglassed sections sell best. Our market is quiet and we are obliged to shade our prices in order to make sales. We have a large stock and cannot advise any more shipments this season.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

CHICAGO.

HONEY.—The sales of comb honey are very light at present, and prices little better than nominal, The stock of that produced in the Middle States is not large, compared with the past two seasons. But then we did not have the Pacific slope pouring it in by the car-load, as they are doing at present, and which can be bought by the case at 12 to 14c. per pound—in combs of 2-lbs. well filled and pure white in appearance. A large percentage of the trade buy it in preference to our Mississippi Valley at the same price. I quote 1-lb. frames, well filled and pure white, at 16c. A little off in color, etc., 14@15c. Extracted, weak, 6@8c.

BEESWAX.—For fair to yellow, 28@30c.

R. A. BURNETT, 161 South Water St.

CINCINNATI.

HONEY.—There is an unsatisfactory demand for extracted honey from manufacturers, while there is a fair inquiry for small packages of clover honey such as dime, ½-lb., 1-lb., and 2-lb. jars, from the retail trade. Prices are low as arrivals exceed the demand. Extracted honey brings 5@9c. on arrival; choice white comb honey is in fair demand and sells best in 1-lb. sections. It brings 15@16c. in the jobbing way. We have several small lots of dark comb honey from parties in Illinois, and offered it as low as 10 and 11 cents per lb, without finding a buyer. Dealers most certainly mislead producers by quoting buckwheat and poplar comb honey, if they are not more successful than we are in disposing of the same.

BEESWAX.—The demand is slow and arrivals are few. Good yellow brings 26@27c. on arrival.

C. F. MUTH, Freeman & Central Ave.

SAN FRANCISCO.

HONEY.—There is a moderate local trade and large orders are being filled for shipment. Stocks are on the decrease and the market has a firmer tone. We caution apiarists against using old or second-hand cases or tins, as such can never be handled to advantage and cause extra expense and trouble. Tins in cases should always have a strong partition between them.

White to extra white comb, 9@10c.; dark to good, 4@8c. Extracted, choice to extra white, 4¼@4⅜c.; dark and candied, 3½@3¾c.

BEESWAX.—Wholesale, 25@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 5½@6c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY.—Honey is in a little better demand at a little lower price than our former quotations. Whilst the market is still full, we are enabled to place extra lots of strictly white one-lb. sections at about 15c., with an occasional sale at 16c.; 1½ and 2-lb. sections, best white, 14c.; dark and second quality, rather slow at 12 to 14c. For extracted there is no demand.

BEESWAX.—28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We quote comb honey in 2 lb. sections, 13@14c; extracted, 6½c.

GEO. W. MEADE & CO., 213 Market.

KANSAS CITY.

HONEY.—The market is quiet and unchanged, with good demand and liberal receipts. Comb, ½-lb. sections, none in the market. They would bring 18c.; 1-lbs., 14@16c.; 2lbs., 13@14c. The above figures are for choice stock in regular shipping crates. Dark or large combs in rough crates sell slowly at 9 to 10c. Extracted, California, 6@7c.; white clover, 7@8c.; Southern, 5½@6c.

BEESWAX.—None in the market.

CLEMONS, CLOON & CO.

"BOSS" ONE-PIECE SECTIONS.

READ THIS.

A word of explanation in regard to the infringement suit on the One-Piece Section, we deem necessary at this time.

I commenced suit against A. I. Root, in the United States Circuit Court, for the Northern district of Ohio; Stanley Matthews presiding. He decided that the patent was void for want of novelty. I have taken an appeal to the United States Supreme Court at Washington, which will decide the case, and its decision will be final. If it goes against me I will submit, but if decided in my favor, I shall expect all who have infringed will pay me damages from date of the patent.

Some unprincipled parties are advertising that the Courts have decided that the patent is void. This is not the case, as it is before the United States Supreme Court at Washington, at the present time. When that Court gives its opinion it will be final, and until it does, any one infringing will be liable for damages, if the United States Supreme Court sustains the patent.

PRICES OF SECTIONS.

One-lb. Sections	in lots of	500 to 4,000	$5.00
Ditto	Ditto	5,000 to 10,000	4.75
Ditto	Ditto	10,000 to 25,000	4.50
Ditto	Ditto	25,000 to 50,000	4.25
Ditto	Ditto	100,000 or more	4.00

The one-lb. Section is 17 inches long. For any sizes between 17 and 20 inches in length, add 5 per cent. For any sizes between 20 and 24 inches, add 10 per cent. Add the above per centage to the price of one-lb. Sections in the same quantity.

J. FORNCROOK & CO.,

50AStBCtf Watertown, Wis., Dec. 1, 1884.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

PATENT FOUNDATION MILLS 6 inch $9 10 " $15

W.C.PELHAM MAYSVILLE, KY.

37ABly

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51A1y Portland, Maine.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

ABtf J. VANDERVORT, Laceyville, Pa.

For Bees, Queens.

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,

1ABly Lock box 995. Belleville, St. Clair Co., Ills.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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Sprout Brook, Mont. Co., N. Y.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

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CHICAGO, ILL.

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49Atf **Wenham, Mass.**

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46A26t

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Square Glass Honey Jars, Tin Buckets,
Langstroth Bee-Hives, Honey-Sections, etc.

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976 and 978 Central Ave., **CINCINNATI, O.**

☞Send 10c. for Practical Hints to Bee-Keepers.

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51A1y

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Successors to A. E. Manum, Bristol, Vermont,

MANUFACTURERS OF

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Hives, Sections, Shipping Crates, &c.

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52A1t HUNNEWELL, MO.

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CLUBBING LIST.

We will supply the **American Bee Journal** one year, and any of the following Books, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	*Club*
The Weekly Bee Journal,	$2 00..	
and Cook's Manual, latest edition	3 25..	3 00
Bees and Honey (T.G.Newman) cloth	3 00..	2 75
Bees and Honey (paper covers)	2 75..	2 50
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 200 colonies	3 50..	3 25
Dzierzon's New Bee Book (cloth)	4 00..	3 00
Dzierzon's New Book (paper covers)	3 50..	2 75
Quinby's New Bee-Keeping	3 50..	3 25
Langstroth's Standard Work	4 00..	3 75
Root's A B C of Bee Culture (cloth)	3 25..	3 10
Alley's Queen Rearing	3 00..	2 75
Scribner's Lumber and Log Book	2 35..	2 25
Fisher's Grain Tables	2 40..	2 25
Moore's Universal Assistant	4 50..	4 25
Honey as Food & Medicine, 100 Copies	4 50..	4 25
Blessed Bees	2 75..	2 50
King's Bee-Keepers' Text Book	3 00..	2 75
The Weekly Bee Journal one year		
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King)	3 00..	2 75
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	3 00..	2 75
The Apiculturist, (Silas M. Locke)	3 00..	2 90
The 6 above-named papers	6 50..	6 00

THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,

1ABtf HOOPESTON, ILL.

HELP for working people. Send 10 cents postage, and we will mail you *free*, a royal, valuable sample box of goods that will put you in the way of making more money in a few days than you ever thought possible at any business. Capital not required. You can live at home and work in spare time only, or all the time. All of both sexes, of all ages, grandly successful. 50 cents to $5 easily earned every evening. That all who want work may test the business, we make this unparalleled offer: To all who are not well satisfied we will send $1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Immense pay absolutely sure for all who start at once. Don't delay. Address STINSON & CO.

51A1y Portland, Maine.

SEND FOR IT.

We have just issued a new four-page circular that will interest any bee-keeper. Send your name on a postal card for it.

44Atf HENRY ALLEY, Wenham, Mass.

FOR SALE.—A one-and-a-half horse-power, wrought-iron, tubular **BOILER AND ENGINE,** in working order. Delivered on cars here for $115.00. Address

52A4t **J. D. ENAS, Napa, California.**

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WANT TO EXCHANGE. Langstroth-Simplicity **Hives** in flat, cases, frames or **White Poplar Sections** for Italian Bees. Address **J. B. MASON,**

52A1t MECHANIC FALLS, MAINE.

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52A3t